The Human Antenna

The Dream Bell & The Electrical Landscape

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Author Disclaimer:

This essay is written in my own style, in my own way. I'm not a scientist, nor have I done any formal research. The following piece was written based on personal speculation and constructed with high efficiency, leaning heavily on AI to research, explore, and co-write much of this theory. It's currently just a first draft, speculating on a number of matters that vary in plausibility and depth of research. It has not been assessed by independent experts, and even my own editing processes have been rushed. I consider this document unfinished and incomplete, but I thought I'd let it fly as it is and see what happens. This theory should be considered for entertainment purposes only, stimulating thought, rather than trying to prove anything absolutely. It's been a slightly freestyle piece that expanded verbosely on a simple investigation, entertaining a smattering of thoughts and possibilities without strict limitations or being overly concerned about complete certainty—more about what could be in possibility. I welcome critique, adjustments, and even efforts to debunk these theories—what doesn't kill it makes it stronger. I expect to produce a more complete version later. Thank you for reading.

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Abstract

Across the millennia, around the globe, it's been believed that sleeping with your head pointed a particular direction improves health, dreams, and quality of sleep, while pointing inversely can have the opposite effect. If this phenomenon is true, it holds fascinating implications for our understanding of both the planet and the human form.

In this essay, a framework is proposed about the nature of the Earth's resonant field and its relationship with the human body, mind, and even genetics.

As our body slows and dims its energy during sleep, a biological entrainment with the Earth's vibrational field is considered likely, which may have great implications—not only for health and healing, but also human consciousness, interconnectedness, evolution, and phenomena we have not yet explored.

Extrapolating on this connection, we explore the possibility that our environment is characterised by sophisticated vibratory mechanisms that affect our gene expression and resulting behaviour and personality, as well as the collective evolution of life on Earth. With the Earth-ionosphere cavity acting as a malleable resonant container, it is proposed that this resonant matrix is affected in semi-predictable patterns that may explain or correlate with astrological models.

Hypothesis:

We propose: The human form acts like an antenna, tuning into a universal ambient, living frequency we refer to as the Schumann resonance. Especially during sleep and certain meditative states, there are potential benefits and uses for aligning directionally with certain cardinal points.

With the resonant field affected by local celestial bodies and nearby systems (e.g. the Sun and Moon), it's considered possible, if not likely, that the *character* of the unique places and times within the resonant field affect human thinking, behaviour, physiology, and even epigenetic changes.

Sleep is believed to include a component of entrainment with the Earth's natural resonance as a primary function, likely using it as a source of energy and information. Considering the Schumann resonance, which

resonates in a malleable atmospheric cavity, we propose that the body's alignment with the strongest sources of the resonance permit a 'surfer' effect, where the body and brain are able to synchronise with the planet's mechanical and electromagnetic resonances, offloading energy demand to support the cleaning and restoration processes undergone during sleep.

With effects on sleep quality, sleep restoration, and consciousness, we propose there is significant potential benefit to keeping the head and heart aligned with relative geographic locations during sleep—much like an antenna with the source of a signal.

Synchronising with internal production of certain neurotransmitters, it's proposed additionally that sleep time is used for epigenetic remodelling and 'updating', potentially making use of information received from a source that is often referred to as planetary consciousness.

Introduction

It was in **writing a book about sleep** that the possibility presented itself to me—that there is an *optimal direction* to orient ourselves when we sleep. That is, when you're lying in bed, whether you should point your feet or head to one of the cardinal compass points.

For some people, this might seems quite a banal subject of investigation. Does direction of sleep really make a difference? And if it does, so what?

One could be forgiven for giving such conversations a pass. But when I came across this question of which direction is best, with just a few explorative steps while writing a small section for book, my own curiosity here quickly developed into a complex and fascinating theory.

Sleep direction isn't a new conversation, although it is an unfinished one. The science shows only a handful of studies, with curious albeit limited findings. It's ancient cultures that seem to have the most to say about it—where our biggest lead comes not from science, but from peoples around the world practising this form of sleep wellness, having strong-held beliefs that curiously aligned with each other.

These conversations, as they came to me, seemed to revolve around a human compass concept—the idea that Earth, our home, has a magnetic

north, and that its subtle pull felt all over the world has the ability to pull our iron-rich blood to one end of our body as we're lying down.

It's been theorised that, if this effect of physics pulls our magnetised blood to our head, it can disrupt our sleep, expectedly through a slight increase in pressure and blood-accentuated activity. However, while I do believe in an effect on the human brain from sleep direction, I do not believe this is the cause.

According to these ancient beliefs, restless sleep and nightmares were sure to find you if you had **your head pointing west or north**. But wait, why should pointing west be worse than pointing east if the effect is ferromagnetism? Something doesn't quite make sense here…

Now you could say here, what evidence is belief? That's not scientific. And you'd mostly be right, except when these "beliefs" span thousands of years, cross borders, and have generations of testimonies. In this case, I am giving them the benefit of the doubt so we can explore a possibility that is not yet written in the literature.

In comparing the east with the west for sleep, I believed this yin-yang difference of effect to be incongruent with the magnetism explanation. This simple explanation just didn't seem to sit with me. I wasn't convinced this was the whole truth—if the truth at all. There was surely more to this picture.

If we look to science, very little effort has been put into distinguishing if there is an optimal direction for sleep and what any effects might be on the human body. But quite possibly, this is something of huge importance to health. If this indeed has a significant effect on the human body, health, or consciousness, entire industries and even civilisations could be shifted just by knowing which way to lie down.

Perhaps this is a dramatic view, such a revolution. But even a subtle biological effect has significant implications, especially when explored to its fullest extent.

If we blend atmospheric physics and chronobiology into a theory, we may speculate on how our vibrational electromagnetic environment can be affected by gravitational and geomagnetic activity. As the sun rises, the atmosphere (specifically the Earth-ionospheric cavity) and its vibrational qualities get manipulated. This invisible tide that we live inside has the plausible theoretical capacity to affect us subconsciously. Our circadian

systems are somewhat sensitive to weak electromagnetic fields—notably the pineal gland and melatonin cycle. Environmental stressors like electromagnetic variation, pressure changes, or solar radiation could theoretically nudge the HPA axis into increased alertness or stress reactivity. Could this be what's making or breaking a good night of sleep?

It is known that geomagnetic storms and solar activity can have impacts on sleep disruption, heart rate variability, mood and behavioural changes, and melatonin suppression in animals—possibly humans. Theoretically, we could propose other nuanced biophysical effects: ion cyclotron resonance (helical ion pathing under the effects of a magnetic field) affecting calcium channels; piezoelectricity in tissues responding to geomagnetic shifts; and biophoton coherence disruption from EM field noise. Indeed, studies are already confirming that ELFs can affect calcium channels in the human brain.[1]

But if our brains in the theta-wave state produce their own electromagnetic field, a correspondence in vibrational state does not entirely explain why it would be necessary to have our heads pointing toward the origins of this resonance, rather than our feet…

Before we get into it, I would quickly like to give a shout-out to Brathikan Vijayamohan Mankayarkarasi, in whose paper '*Geo-Somatic Resonance Theory: A Vibrational Framework for Sleep as Planetary Entrainment*'[2] is proposed effectively the same hypothesis. Discovering his work (published June this year) toward the end of writing this paper, it's promising to see that the same or similar conclusions can be arrived at—especially curious given this subject contains ideas around shared consciousness.

Because he explains it so beautifully, I thought I would include Mankayarkarasi's abstract and hypothesis for you:

Sleep is traditionally studied through neurochemical, evolutionary, and behavioral frameworks, often focusing on circadian rhythms and energy conservation. However, these models fail to address a deeper biophysical question: why does sleep universally require stillness, a prone posture, and disconnection from conscious control? This paper proposes a novel hypothesis — that sleep is not merely a biological cycle, but a state of vibrational entrainment between the human body and the Earth's natural frequencies. Through this resonance, the body undergoes energetic restoration,

vibrational recalibration, and passive realignment of internal systems. The theory frames life itself as a continuous act of internal vibration modulated by environmental fields. This foundational model of sleep may offer a new lens on aging, death, health, and consciousness.

…

Sleep is a vibrationally entrained state where the human body reduces autonomous activity to synchronize with the Earth's electromagnetic and mechanical background vibrations, thereby achieving physiological and systemic restoration. The Earth's vibration provides the minimal energetic support needed to sustain the body's dynamic functions at rest — much like a passenger boarding a bus, letting external motion carry them forward. This entrainment allows internal effort to reduce dramatically while the system continues moving through the supportive rhythm of the Earth's field.

I now plan to continue this discussion, all too verbosely dragging you through a sea of information and ideas that seek to explore the bigger picture. With the primary idea of sleep being an energy-saving protocol during our daily reparations, an intimate understanding of the Earth's electromagnetic landscape and a deeper dive on precisely *how* it affects us I feel is warranted.

A *character* to the Earth's vibrational qualities is proposed that is dependent on time and place, which has affected us on a genetic level evolutionarily. This may have additional implications for foetal and childhood development, affecting early-life epigenetic changes that may explain astrological correlations between personality and time of birth.

We will examine the qualities of the vibrational matrix in which we live but cannot see. We will explore the interactions between an invisible energy field and the neurons in our head. And, we will consider the body's evolutionary strategy to make use of the peace of night to maximise coherence with the planet at large.

Buckle up.

The History of Sleep Direction

The vast and numerous dynasties of China and India have largely been in agreement with the nuance of sleep direction. To the **south** or **east**: **good**. To the **north** or **west**: **bad**.

Toward the rising sun, yes, but **away from the magnetic north**.

Other countries and cultures throw in a smattering of similar practices. The Romans would often align tombs and beds east-west. Christian monks would often point themselves toward the rising sun. Germanic and Scandinavian folklore warned against pointing oneself north at night, thought to drain vitality and invite bad dreams. Historically, there seems a surprising amount of agreement on such matters, and yet these practices and beliefs seem to have all but disappeared in the modern age.

Considering which of the cardinal points—north, east, south, west—should correspond with the head or feet when we lay ourselves down to rest is not something new, although if there is a significant, measurable impact on human wellbeing, such a consideration has hardly been explored.

Cultures all around the world, with wisdom hailing from different eras, have indicated on their own accord what sleep rules we should abide by. This extends beyond sleep, to the directions our ancestors would pray, bury their dead, and construct their buildings. Detailed most in Vedic and Chinese philosophy, it's agreed that an eastward-facing head while sleeping is good for vitality, pointing toward the rising sun, while the opposite is said to bestow nightmarish dreams and wakefulness. But is there any truth to this? If there is, it stands in defiance of the original ferromagnetism theory. Could there be a common actor of effect between the north and west as there is between the south and east?

In nature, animals like cattle and deer will naturally align themselves with the north or south, while human babies often turn around in their cots. Studies of the new millennium have found that grazing animals will statistically spend more time in a north-south orientation regardless of wind or sun, while dogs will do the same while they're defecating—although this alignment disappears when geomagnetic conditions are unstable.[3,4] Migratory animals have electromagnetic quantum hardware in their brains that helps them orient in a particular direction, and we now know that quantum systems also exist in the human body that respond to magnetic influences.

These varied claims from ancient lore, cultural practices, and modern science that certain cardinal directions are better than others for sleep appear on face value to have some alignment. On top of some personal experience corroborating this—including finding during my travels that various hostel and homestay owners will purposefully align their beds with the north or south—it's not such a farfetched theory that humans and their sleeping patterns should be affected by environmental energies.

Vastu Shastra, an architectural tradition from India, maintains that it's best to point your head south while sleeping, which is a belief shared by other cultures. It's thought that this can be rationalised through aligning the body with the Earth's magnetism, supporting deep sleep and even lengthening lifespan, while pointing north has opposite effects. Pointing east is also considered beneficial in traditions like **feng shui**, while west is thought to be harmful.

The composite picture I have created, based on the vague assimilation of various clues from different traditions and teachings—including some limited insight from modern science—is that the most beneficial sleep direction is **likely dependent on which hemisphere you are in**.

The philosophies of all countries and regions listed above—India, China, Rome, Scandinavia, Germanic regions, and different religions—all maintain that one's head should **point south**. However, these countries and cultures have largely existed in the ***northern hemisphere***, where south may only be the best direction **relative to their location**. Could it be possible that these recommendations do not apply unilaterally across the globe? This would surely depend on the mechanism(s) involved. But, seeing as we're starting to consider there's a difference between east and west, the original premise of a 'magnetic north' explaining the primary effect may not be so robust anymore.

First Takes: What We Know, What We Don't Know, And What Could Be Possible

Given the science is limited and presumes known mechanisms (taking interest mostly in effects), and since it does not account for what in my opinion are likely to be contributing variables, we can observe this literature without adhering too closely to what it deems to be a conclusion. In lieu of these limitations, it's my intention in the meantime to propose a

theory more around *why* different directions have different effects—the mechanisms at play, and a fuller account of the situation at large.

Studies so far tell us quite little. They don't specify details about the **location**, the **times of sleep**, the **phase of the moon**, the **weather**, or other potentially important factors. If we are indeed orienting ourselves with the planet, then we should be thinking worldwide.

It's likely that this potentially significant oversight is because those researching simply haven't known what is causing the effects. Their goal has been to find more foundational information—seeing if there is an effect in the first place before all mechanisms and factors can be explored and accounted for. By a default guess, the mechanisms are attributed to magnetism and therefore don't warrant much more investigation. This is not a point of blame, but a recognition that science often takes small, cautious steps and narrows its focus to just one piece of the puzzle at a time.

Regardless, lack of concrete information here means that this essay is inherently speculative. In fact, this essay would not exist if we had concrete information that explained everything. For us today, however, we will dare to take bold steps to theorise on the unproven. But what is really true? What is completely up the wrong tree? Hopefully, I will leave you sufficient information to decide for yourself.

It is interesting enough that bodily alignment goes back millennia—through religions, cultures, and folklore of ancient times. But when we begin to consider how the modern science on atmospheric qualities, acoustical physics, and molecular biology may all be playing parts in a grand orchestration that borders on spiritual, we begin to deepen our appreciation for the immense complexity that may have been behind this historical advice all along.

Based partially on gut feeling and speculation from varied but limited evidence, my current hypothesis is that pointing your head relatively **towards the equator**, **or eastward** (regardless of location), appears to be the best practice. But why would this be the case?

Given we're crossing magnetisation off our list, we need to look at what other effects might be causing an alignment or misalignment between person and planet. Our first clue is that, regardless of whether there is a

difference between north and south, there is a consistently stated difference between east and west. The most obvious mechanism, therefore, would be logically to do with either the **Earth's rotation** or the **relative position of the Sun**.

While rotation is ever consistent, the relative position of the Sun changes with the time of day. Early in the night, the Sun, after sunset, is technically westward (angles dependent), although for a "standard" sleep routine of around 10pm to 8am, there is a large time bias of the Sun being to our east, given most of our sleep hours technically take place in the am, not the pm.

Simultaneously, there still seems to be some effect from an alignment with the north and south. Some studies simply mention a north-south orientation without finding or specifying a preference between the two. We will explore the science on this soon, but for the initial premise of our speculations, we might consider an effect that could favour either the north or the south while consistently favouring the east. As mentioned, my hypothesis was that the effect may be hemisphere dependent.

Initially, I rationalised this equatorial force as being something to do with the Coriolis effect, rather than a north-set magnetism. This is the 'water drainage effect', where the Earth's spin affects the movement of bodies and currents of water and wind, as well as the trajectories of free-moving objects. You might remember it from seeing water in toilets and basins draining either clockwise or anticlockwise depending on which hemisphere it's in.

This worldwide Coriolis effect deflects air and water rightward in the Northern Hemisphere and leftward in the Southern. Given these are such massive global effects, one could speculate on human bodies also containing fluids, such as blood and cerebrospinal fluid. Could pointing one's head toward the equator or eastward potentially reduce resistance or improve circulation? Some research suggests that gravitational and rotational forces do subtly affect blood distribution, so there *might* be an impact here.

The vestibular system, or inner ear, relies on gravity for balance and orientation. If Earth's rotation affects balance subtly (like how astronauts in space experience shifts in spatial awareness), sleep orientation could potentially influence neurological relaxation. However, the Coriolis effect is known to affect large-scale systems, and its effects on relatively high-pressure blood circulation are likely to be negligible on their own.

Although, over an eight-hour sleep period, small differences can stack up… But while there is a possibility that the Coriolis effect plays a contributory role, we might consider other, more dominant influences.

One proposed theory mentioned earlier is that the iron in our blood is drawn to the magnetic north, and when we lie down, cranial blood flow increases, making us more wakeful. Blood does contain iron, but when it's bound into its haemoglobin structure it's not as magnetically reactive. However, magnetism is shown to increase blood viscosity, and coupled with Coriolis forces it may be enough to influence or optimise circulation, especially when we consider that healthy blood has a helical flow, vortexed from the heart, which keeps the blood cells evenly mixed and supports nitric oxide, which in turn can affect electrical signalling. In contrast, if the blood is not vortexing properly, the chaotic, irregular flow of turbulent blood can lead to a number of health issues. Could the support or disruption of this helical motion potentially affect our sleep?

While blood magnetism is unlikely to be the sole culprit, again we can consider that this complexity and even perceived inconsistency between cardinal directions could be attributed to a multivariate equation, where any number of effects from gravity, planetary movement, and magnetism could all be playing games with our fluids and sensitive instrumentation while we're unconsciously at the mercy of a planet hurtling through space.

It is already well established that animals and humans alike are sensitive to the Earth's magnetic energies, with magnetoreception famously allowing navigational abilities in birds. Pilots, divers, and astronauts can experience disorientation due to Coriolis forces when moving quickly in different rotational planes. So, if humans have some sensitivity to both magnetic *and* Coriolis forces, then their combined effect might influence bodily processes like sleep.

This combination would still imply a difference in 'sleep navigation' between those in the Northern and Southern Hemispheres, and could suggest that one hemisphere is slightly yet consistently better for sleep. The Coriolis effect is stronger farther away from the equator, while the Earth's magnetic energies are also stronger near the poles, especially Magnetic North. I ask: are people sleeping better or worse due to latitude?

Interesting though it is, we will pocket this conversation for now. Let's sweep through some of the more interesting and relevant studies that

could clue us into how the human body and brain are responding to each direction.

A Handful of Studies

There are a few studies we can call upon to lay some literature for the foundation of this conversation.

One of these studies was conducted in Germany (in the northern hemisphere), where only eight young men between the ages of 23 and 27 were analysed for their sleeping patterns, where each night their beds rotated 90° to a different cardinal point. While north-south was considered slightly more optimal, the study did not distinguish any marked beneficial difference between having one's head pointing north or south.

However, a study from 1985 in India found a north-pointing head to correspond with the Earth's oscillating magnetic field, with "an accentuation of activity in the East orientation". Interestingly, the North orientation also showed changes in levels of metabolites of catechol and indole amines—neurotransmitters such as dopamine, serotonin, and melatonin.

This study used twenty young males, ten of which were practised yogis. In a controlled magnetic field (CME) enclosure, the men laid supine—on their backs—elevated two metres above the floor. Measures were taken to insure against interference and bias, splitting brainwaves into separate recordings.

With previous tests on rats, a head pointing *north* led to an increase in catecholamines (noradrenaline and dopamine) and a decrease in the indole amine level (serotonin and its metabolite 5-HIAA) at exposures to very low frequencies at 0.1 Hz and below, as well as an increase in blood sugar. From my own interpretation, this might be read as a stress response. And when the test was done on humans, similar results emerged. In the words of the researchers: "a considerable and abrupt inhibition of the brain's electrical activity".

Under these conditions, the brainwaves were veritably nullified, which resulted in the subjects complaining of confusion and restlessness. While the ECG heart readings and breathing remained unchanged, peripheral blood flow (veins and arteries outside the chest and abdomen) decreased

substantially. In the rat subjects, cardiac functions and rhythms were disrupted, and they were observed to have an increase in aggression and screeching. In the yoga/meditation group, negative effects were noticeably reduced.

In tests with heads to the *east*, markers improved. The subjects reported relaxation and mental coherence; peripheral blood flow increased, and there was no rise in blood sugar or cortisol as observed in the north-facing tests.

The metabolites of serotonin and dopamine were measured in test groups' urine, which would be indicative of their implication in the directional coupling process if there is one. To the north, there was high dopamine, low serotonin, and elevated blood sugar and cortisol. To the east, the biochemical and electrophysiological indices shifted in the opposite direction—low dopamine, high serotonin—suggesting parasympathetic dominance and a calmer subjective state. If these are solid, repeatable findings that apply broadly to the human race on Planet Earth, it shows a noticeable physiological response that, over time, or even instantaneously, could affect health, happiness, and a number of sleep parameters.

It should be noted here that Madras City (Chennai) is considered an equatorial region, only around 10° magnetic inclination, with a total magnetic intensity about 40000 nano-Teslas. If we are considering Coriolis effects, they are weakest at the equator, and may not be strong enough at that latitude to have a measurably significant effect.

In 2019, neuroscientists at Caltech published a striking study[5] showing that the human brain can quietly "notice" changes in the Earth's magnetic field. Inside a carefully shielded chamber, they rotated a geomagnetic field of the same strength and inclination as the real one outside. What they found was surprising: when the field was turned in a way that mimicked natural conditions in the Northern Hemisphere, the volunteers' brains showed a sharp dip in alpha brainwave power—a kind of subconscious "wake-up call" signal that usually means the brain has registered something important. But when the field was spun the other way, or flipped to resemble Southern Hemisphere polarity, nothing happened. This shows the response is direction-sensitive, as if our neural circuits can tell north from south.

This suggests that, like a tuned dipole, the body is not only immersed in the Earth's electromagnetic environment but may also resonate with it in ways

we don't consciously feel. The brain's electrical networks appear to couple to geomagnetic cues, but only under certain directional alignments—the same way an antenna picks up a signal more strongly when it's angled just right.

In studies from China[6] and Japan[7], inaudible artificial Schumann resonance was broadcasted to participants. They found that these would support sleep, reduce blood pressure, and support stress. Other studies have used ELF frequencies (not necessarily at the base Schumann frequency, but within Schumann capabilities) to observe things like improved collagen synthesis, enhanced wound healing, inflammatory responses, and cell migration.[8] This one is particularly interesting to me, given we're discovering through the study of cymatics that sound and vibration appear to play a part in movement and physical order. Could this be supporting neural orchestration in the brain?

Lower frequencies were also believed to be able to enhance cytoskeletal and extracellular matrix (ECM) remodelling. This is effectively the readaptation of the 'scaffolding' both inside and outside of cells, rebuilding, reorganising, and permitting better functionality for healing and signalling among other activities.

Various anecdotal reports and, from what I can see, wives' tales, claim even more magnificent benefits, from preventing bone loss to being a staple backing for human life. Without it, it is said, we inevitably fall to confusion, pain, and disease. While some sources are difficult to verify and at times appear to be inflated, they are not so farfetched when we consider what the SR is and how it may be a universal force of order on our planet—a constant, like a metronome, that all life on Earth may 'tick' to on some level. For if vibration and frequency are at the foundations of life itself, the SR may itself be a kind of container or reference frame. To not be in harmony, or to be deprived of this 'synchronisation pressure', may invite disorder or mutation, such as sickness or disease. We might even wonder if sickness or disease obtained some other way could lead to a desynchronisation. For this, we might speculate on what we're putting into our bodies, our air, our water, and what signals we're busy broadcasting that could interfere with this global frequency. Indeed, what are the consequences of denaturing the heartbeat of Mother Earth?

The Human Antenna Hypothesis

Usually, when the importance of sleep direction has been discussed, conversation inevitably connects any north-south orientation with the compass point. Geomagnetism becomes the focus, considering the iron-blooded human a kind of rotational device pulled most strongly to the magnetic north that some say we should defy or resist. And while there very may well be an effect from this, beyond what we know now, I ask what might happen if we instead regard the human form more like a radio antenna.

This theory emerged from the recognition that magnetism alone is a weak justification for the effects reported from various sleep directions. My initial consideration that the Coriolis effect is the primary contributor also fell somewhat flat, given mathematical calculations would suggest an effect several orders of magnitude too small to explain the reported effects on sleep. A simple broad 'pulling' or 'pushing' effect seemed too clumsy, too easy even for the limited studies to rationally debunk.

In writing my recent book, I learned about the nuanced processes of the brain during each sleep stage. In the non-REM stages 1 through 3, along with the famous REM stage, each stage represents specific functions and operations in the brain and body, which includes a complex orchestration of neurotransmitters, hormones, and regional activations in the brain connected with different brainwaves.

Most notably, I recognised a curious alignment between the theta brainwave of 4–8 Hz and the Schumann resonance of around 7.83 Hz. This goes beyond just some coincidence of number ranges, however, and has a fascinating base in neuropsychology. As it turned out, I'm not the only person to have speculated on this connection—but we'll explore more on this soon enough.

In our routine sleep cycles of around 90 minutes, with around four to six cycles per night, we transition between these stages a bit like changing gears in a car. This theta brainwave is activated in non-REM stages 1 and 2 as well as during REM sleep. These first two light-sleep stages account for

around 50–60% of our overall sleep time, while REM in healthy sleepers accounts for around 20–25%. This means that around 70–85% of our time spent sleeping is associated with this theta brainwave frequency, and can also be active while we're awake in bed or in meditative states.

So what exactly is happening when we're in theta?

Neurologically, regions of our brain—most notably the hippocampus and frontal regions—vibrate between 4 and 8 Hertz. Neurons fire in coordinated bursts at this frequency, bridging memory and imagination. *Chemically*, levels of GABA and serotonin neurotransmitters help to dampen arousal, while acetylcholine—which activates attention and muscles—rises in certain circuits to support vivid imagery and memory processing. *Experientially*, the theta brainwave can induce a kind of drowsy, relaxed feeling, where time slows and external awareness begins to dim. This state, activated in meditation, puts us in a dreamlike existence, and can tune our mentality to being more open and suggestible—inducing a kind of informationally integrative mode of consciousness.

Curiously, this sleep-dominant brainwave seems to correspond with the base frequency of the Schumann resonance (SR).

This resonance is often referred to as the electromagnetic "heartbeat" of the Earth, which can spike and fluctuate seasonally and even by the hour of day. These spikes and fluxes usually come from major geomagnetic disturbances, solar events, and increases of lightning strike frequency. Yet despite its propensity to fluctuate, it always returns to baseline 7.83 Hz, as its wavelength is determined by the circumference of the planet.

Discovered in 1952 by physicist Winfried Otto Schumann, the resonances (plural) represent a set of natural electromagnetic oscillations that are present worldwide at all times. While the base frequency usually sits around this lower frequency of 7–8 Hz, it also exists in layers or harmonics, where higher sections of the atmosphere resonate at higher frequencies—in intervals of approximately 7 Hz: 7.83 Hz, 14.3 Hz, 20.8 Hz, 27.3 Hz, 33.8 Hz, all the way up to and beyond ~60 Hz—the highest reliably observed harmonic overtone of the SR. While the most notable characteristics and effects of the SR exist in the inner atmosphere, the resonances can be detected thousands of kilometres outside the Earth's atmospheric boundaries before they fade out beyond detection.

Other cosmic bodies also have their own resonances. We've so far detected Schumann-like resonances from the likes of Venus, Mars, and Saturn's moon Titan. This speaks to a natural character of planetary acoustics—ones that can morph and change depending on both the physical dynamics and energetic ones.

Now before we go too deep into the nerdy-wordy and dive into the full body of physics and explanation behind the Schumann resonance, we might quickly acknowledge that there are fascinating studies now that show regular correspondence between the human brain activity and this planetary resonance, especially during sleep and meditative states.

It's known that a human brain hooked up to an EEG will correspond with the Schumann resonance for roughly half a second around every thirty seconds. The implications of this are profound, and the implications of a sleeping brain in the theta wave are potentially even more telling. If the brain routinely 'checks in' with Earth's electromagnetic field, it might hint at a deeper bioelectromagnetic connection between humans and planetary rhythms. Some theories suggest this could be linked to circadian stability, sleep regulation, and even collective consciousness.

These discoveries have led a few sharp thinkers to conceive of a kind of relationship between the Earth and its inhabitants. Given there seems to be such an acute alignment and even some supporting science of a direct connection, it's plausible that the planet itself is able to influence our consciousness collectively—even contributing to our collective evolution, as some people believe. Certain experiments such as the 'National Demonstration Project to Reduce Violent Crime and Improve Governmental Effectiveness' in 1993 found that transcendental meditation done in groups have had a strongly statistically significant effect on the real world, lowering crime by 23.3%. Statistically speaking, this would have otherwise been considered a miracle (a chance less than 2 in 1 billion), and could stand as evidence of a theta-based entry into the collective planetary consciousness.

The essence of the theory I am proposing, however, is that this resonance is harnessed most during our sleep hours, using this correspondence or coupling as part of our repairing, cleansing, and memory consolidation—especially within the brain. From a point of speculation, it could be possible that 'surfing' these environmental frequencies through a synchronisation process could offload energy demand, allowing the brain to undergo more

efficient maintenance cycles or reap other unexplored benefits. Making practical use of these “carrier frequencies” could be coupled with an informational ‘tuning’ function—uploading, downloading, or processing information.

While sleep represents the most efficient time for repairs and cleaning, it appears that the brain is the main priority during sleep. Any other part of our body can rest while we’re awake, but the conscious brain needs to be ‘switched off’ for it to be cleaned and repaired effectively. The brain is highly metabolic, generating waste at a faster rate than the body, requiring a dedicated detox system. The body can perform some repair while awake, but the brain needs sleep to do its deep cleaning.

The glymphatic system (a waste-clearing system in the brain) is 10 times more active during sleep than when awake. It flushes out toxic by-products like beta-amyloid (linked to Alzheimer's) and tau proteins through cerebrospinal fluid (CSF).

Deep sleep is when this cleansing is most efficient, which happens in NREM stages 3 and 4, also known as slow-wave sleep. My initial theory was that the deep cleaning would take place during theta brainwaves, although NREM 3 and 4 are primarily in delta activity (0.5–4 Hz), which is also linked with memory consolidation and physical restoration. The reason why I considered this down-for-maintenance time to happen in theta was because I considered that the brain could effectively be ‘riding’ the Schumann resonance and even mechanical waves and vibrations from the Earth to effectively allow the rest of the brain to shut off, saving energy or recharging through synchronised activity.

Each sleep stage represents a distinct mixture of brainwave frequencies, using a specific recipe of neural rhythms to support specific functions. Different parts of the brain are considered most responsible for particular frequencies, working together orchestrally to tune itself for specific kinds of functionality. Given the atmosphere is itself a composition of different frequencies and electromagnetic influences, we might wonder how our brains have evolved to make practical use of them.

Brainwaves don’t have a single physical origin point in the brain; rather, they emerge from the synchronised electrical activity of neurons. However, different types of brainwaves tend to originate or be most prominent in specific brain regions:

- Delta waves (0.5–4 Hz): Often associated with deep sleep, these waves primarily arise from the thalamus and cerebral cortex.
- Theta waves (4–8 Hz): Common in deep relaxation, meditation, and early sleep stages, they are generated largely in the hippocampus and midbrain.
- Alpha waves (8–14 Hz): These waves, linked to a calm, alert state, often originate in the occipital lobe (back of the brain) and travel forward.
- Beta waves (14–30 Hz): Associated with active thinking and problem-solving, beta waves tend to dominate the frontal lobe.
- Gamma waves (30–100 Hz): Linked to high-level cognition, consciousness, and perception, they involve widespread neural synchronisation across multiple regions.

In REM, which is considered the primary dreaming stage, we sometimes question where our strange, profound dreams come. It would appear with theta's activation of the visual cortex, we could be integrating information into our conscious and subconscious brains by tuning into the SR. And if theta provides the paint, the visual cortex is the canvas. Indeed, could dreams sometimes channel information from a universal field?

In alignment with these planetary influences, we may have even more to gain in both our waking and sleeping lives, possibly including a piezoelectrical stimulation factor within our cellular structure, while misalignment may lead to less efficient sleep or even aggravations or dysfunctions in our physiology. This explanation seems to match with what is taught in Eastern tradition. However, there's still a lot of enigma in the brain's functions, especially when we enter conversations on dreams and the energetic relationship between the individual and the planet.

Some hypotheses propose that ELF (extremely low frequency) electromagnetic fields could influence ion transport in cells (important for nerve function), affect melatonin production (which regulates sleep and immune function), and play a role in electrochemical communication in the brain, although this remains debated. While research is limited, some studies suggest that these fluctuations correlate with mood changes, heart rate variability, and cognitive function.

K-complexes are part of this—which are spontaneous, high-amplitude brain waves primarily seen in non-REM Stage 2 sleep. Yet these also happen while we're awake, especially in relaxed or meditative states. K-

complexes are deeply entangled with the theta brainwave—which of course corresponds with the Schumann resonance—but they can also be triggered by external stimuli like sudden noises. Key neurotransmitters like GABA and glutamate are linked to K-complexes, helping to 'change gear' from one sleep stage to the next, as well as playing a part in memory consolidation and synaptic plasticity. This could mean that the entrainment or phase coupling (synchronisation) with the Schumann resonance could mean that the Earth itself plays a part in our individual consciousness.

For me, Rupert Sheldrake's theory on morphic resonance comes to mind, where it's suggested that our memory and cognitive processes are not isolated to what's inside our skulls, but we are tapping into an aetheric information field. If true, the mechanisms for this would largely be vibrational, as we already understand electromagnetic waves to be the carriers of vast amounts of information.

A rudimentary theory I explore in my upcoming book *Quantum Human* is the idea that the physical structure of neuronal groups—and even structures within cells—could be creating a special kind of geometry whose tiny electromagnetic field could be resonating at a very particular frequency. In this, both the body as a whole and the parts within it could be acting like a holonic antenna system, connecting with fields that are not limited to the confines of the human body.

While we could only speculate on the planet's role in this, there's a growing body of support for the hypothesis that planets and stars are not just dead celestial rocks, but vastly complex living entities whose consciousness permeates those within its ecosystem. A question that's sometimes asked is, is Mother Earth conscious? And if so, what does that make the Schumann resonance?

Even if we see our solar system as a lucky swirl of dead rocks floating in space, we can at least acknowledge that they each have a colossal gravitational imprint. If we are considering massive planetary effects on vibrational fields, we could logically deduce that if the vibrational field affects us, the gravity that manipulates the field could also have an effect on us. And if we extrapolate to include the possibilities of quantum coherence and resonance achieved through vibrational synchrony, is it even possible for us to have a direct personal link with the celestial gods of our solar system?

This could easily go deeper into conversations on quantum mechanics, even exploring the mechanics of psi phenomena as detailed in Dean Radin's book *Entangled Minds*. The phenomenon called presentiment represents a form of precognition (telepathic foresight), where the human brain and autonomic nervous system are proven to respond to future events before they happen. This is not something isolated to specialised psychics, but a phenomenon that inherently belongs to all humans. It seems almost unbelievable to consider, but if the premise of intuitive foresight is indeed true, we might wonder if it's connected with a greater body of consciousness.

In a broader theory of astrological physics—how vibrational influence of celestial bodies impacts human physiology and even society's chronological events—our understanding of time itself could be transformed when we consider that the quantum wave function is not independent of measurable, patterned influences from planets and stars. Indeed, if consciousness as a concept extends beyond the boundaries of living entities, the connection between a human and their planet, and between different humans on a planet, could play a part in our physiology, expressed in our autonomic nervous systems.

The truth is, we do not yet know all functions of the human body nor of sleep. Harmonisation of the human brain with the Schumann resonance could involve some kind of uploading or downloading during our sleep hours.

The production of dimethyltryptamine (DMT) in theta states would be a curious addition to discussions on metaphysical realities. Those who speculate that DMT is a chemo-spiritual gateway to other dimensions might also consider that this molecule plays a role in information transmission—perhaps even playing a part in how information is integrated and stored in the brain or body.

A theory I present in my upcoming book *Quantum Human* looks at serotonin as a social molecule, vital for intuitive communications and brain synchronisation. As DMT interacts with serotonin receptors, any corroboration of this serotonin theory could lead us to a more confident speculation that neural remodelling is influenced by forces and intelligences outside of our physical bodies. As DMT is a serotonergic molecule that can theoretically penetrate our cells' nuclei and interact with our DNA, production of this molecule during sleep could have implications

for epigenetic 'updating' over the course of the night. Perhaps saying you're a new person after a good night's sleep isn't such an exaggeration after all…

But what qualifies the human body as an antenna?

Firstly, there are many different kinds of antennae. The fundamental idea behind an antenna is for the physical size and shape to couple with electromagnetic signals that carry both energy and information. When the antenna is pointed the right direction and able to resonate at the same frequency, it 'couples' with the signal and is able to transduce (translate) it. The size is important—relative to the signal's wavelengths themselves—and directionality aligned with the source will help to achieve a cleaner coupling and clearer signal.

And so what evidence have we that the human body can do this?

To enter into this conversation, let's first consider the properties of an antenna.

The general principle of design is for an antenna to collect or deliver electromagnetic radio signals, converting them from or into electrical signals. Waves of sizes much larger than the physical antenna can be whittled down into a denser energy for reception. The invisible is made visible, the inaudible made audible. Sense and beauty can be deduced from what appear to be simple atmospheric oscillations, broadcasted out or tuned into.

We already know that the human brain switches frequencies for different modes of operation. And as brainwave frequency shifts, the bioelectric field around the body also changes, potentially influencing local coherence or resonance with external fields (e.g. the Schumann resonance).

In *Delta* and *Theta*—our lower-frequency states—the body is more inclined toward dominance of the parasympathetic ("rest and digest") nervous system, while *Beta* and *Gamma* would be more in favour of the sympathetic (activating) system, making one more alert. Some research suggests that a change in brainwave state can correlate with subtle shifts in biophoton emission from cells, especially in the brain and heart. [9,10]

As the brain entrains to a particular frequency, resonant patterns may begin to propagate through the body—especially in fascia, water structures, or microtubules—effectively changing its vibratory 'signature'.

We see that the theta and gamma waves produced in REM tend to couple—the theta providing a kind of timing framework while the gamma bursts punctuate the rhythm, like syllables inside a sentence. In the hippocampus, this coupling is critical for memory encoding and retrieval.

If the very flesh of the human body—that is, anything made of our cells—is receptive to environmental energies, this energy may also carry information, which is then logically transferred to that flesh. This may not necessarily be a coherent signal, but information that could even possibly exist in some kind of ambiguity or superposition until it is translated subjectively through a living medium.

This could even carry the possibility that really any part of the human body is an antenna both within itself (micro) and as part of a larger system (macro). The body may even make use of multiple antennae simultaneously, maximising conductance and transduction of energy and information across a greater band of frequencies. Antennas within antennas—geometry within cells within geometry *of* cells. Even the ears could be compared to a kind of horn antenna if we squint our eyes and permit some loose speculation.

The human body drawn as a simplified stick figure isn't too far from the resemblance of a monopole antenna—a long vertical stick with a bulb (head) at the tip. A simple dipole antenna, what most people would have seen on the top of an old television set, is physically straight and rigid as well. However, the invisible bodies of both of these antennae radiate in a toroidal doughnut shape.

If we go deeper, more internally, we find that neurons are already known to fill the role of dipoles, with directional localised fields set at specific orientations. Further down, we see helical DNA structures that could resemble spiral antennae, and even some resemblance between array antennae and the mitochondria powering our cells. While signal transduction is speculated in some circles to be a lesser-known but critical function of our DNA and microcrystal-containing pineal glands, it's not completely implausible to consider the entirety of the human form a kind of fractal antenna system. If the body's construction forms a nested fractal design of antennae within antennae, we may have evolved (or been designed by nature) to be able to transduce or respond to multiple signals and wavelengths simultaneously—from the fairly large to the microscopic. If the waves constantly existing around the world have a consistent size and direction, then the physical size, shape, and sleep direction of human beings and their 'componentry' could even be a product of invisible

energies around the world. However, this is just a speculative consideration.

But if the human body is tuning into different frequencies around the globe, this activation of theta brainwaves and frequential alignment with Schumann resonance warrants further exploration. What exactly is this resonance, what are its directional qualities, and what could it mean to couple with them?

Let's dive deeper.

The Electric Landscape and the Bell of Dreams: Schumann Qualities & the Earth-Ionosphere Cavity

The simple premise: The Earth's atmosphere acts as a resonant cavity whose vibrational electromagnetic character is influenced by light, gravity, and environmental properties. As we are bathed in this vibrational matrix since before we were born, we are effectively tuned on the molecular level according to location and time.

As the Sun rises, the first trickles of light scatter across the sky. The very air becomes ionised, becomes charged and energised, crackling soundlessly as the electric landscape comes into view, painted with invisible solar static.

We normally think of nature as biology—something wet like a fungus emerging slowly from the earth to reach towards the juicy light. It feeds on water, heat, and light—chemical reactions from particles moving and interacting. Leaves and flowers can be thought of as solar panels, but so too are they charge-carrying extremities of larger organisms—and they're very specifically organised into shapes, patterns, and distributions.

Both above and below the soil, plants are electrically conductive and are sparking continuously with signals, sensitive and responsive to the electric fields around them. As they protrude into open space, we might begin to perceive them, in the light of this essay, as antennae. Could the very construction of nature be based primarily on resonance, rather than

Indeed, could the very world around us effectively be different kinds and shapes of conductor, of antennae that assert themselves into space for reception of energies of all kinds—not just light? What if one of the key

pieces completely overlooked in evolution and really one of the primary design considerations of life itself is to conduct and transmit information. After all, we have supposedly evolved to energies and influences around us, even before we had developed senses for them. here was allegedly a time in our evolution before we had eyes to see or ears to hear, and yet light and sound characterise the entire universe.

So what are the implications of these modalities of energy also being information, and what does it mean when plants, mushrooms, animals all have physiological architecture that work like antennae? Are trees only tall to beat their neighbours in a race toward light, or does extra altitude give it an advantage in reception?

As we go up, air density decreases; so too does the voltage needed to ionise the air—the electrical breakdown voltage. Higher up, there are fewer air molecules to resist this electrical breakdown. Lower air pressure = higher ionisation. A taller tree, up at its tip where the electrical potential is greater, intercepts more ions. Along with height, branch arrangement and leaf shape matter. This charge collected spreads across the trees conductive tissues and is dissipated to the ground and into the soil.

The Earth-ionosphere cavity (EIC) is the invisible chamber in whose resonance we all bathe. A huge atmospheric space that surrounds the planet, acting as a medium for sound and a number of electromagnetic and radio waves. If the Schumann resonance is the beat, then the EIC is the drum.

This is simply the space between the ionosphere—our upper-mid atmosphere—and the ground. This creates a resonant cavity where the Schumann resonance is most prevalent and appears to be influenced by its invisible shape.

The ionosphere's lower edge begins in the mesosphere, existing across the thermosphere and into the exosphere some 600km up. The ionosphere itself is an electrified region whose reflective ionised particles form a conductive upper plate, whereas the Earth's surface acts like a conductive lower plate. Between the two, radio waves move and bounce around, with lightning strikes acting like drumsticks, 'playing' the cavity.

The properties of this cavity can change and morph. Routinely, the relative trajectories or positions of the Sun and Moon will pull and contort this

invisible cavity and its ionic ceiling. This changes the resonant properties of the cavity and can skew its shape to be more or less resonant depending on time of day or season.

Just like if we were in a cave listening to its echoes, a larger cavity can accommodate fuller, more sustained vibrations from overlapping echoes and a bigger build-up of reverberations. This doesn't always increase volume (loudness), although there can be a reinforcement of certain frequencies when the space dimensions match the sound's wavelength. Likewise, a "fatter" atmospheric cavity changes how well certain resonant modes can sustain energy—like how a drum changes pitch/volume with size. This may modulate resonance characteristics to some degree and create a **moving vibrational epicentre** that, throughout the night, changes how we couple with the resonance from a fixed sleeping position.

The Schumann resonance that exists most prominently in this cavity is a *standing wave* that forms in the EIC. A standing wave, for those who don't know, is a wave that looks like it's "stuck in place", created when two waves of the same size travel in opposite directions and keep reinforcing and cancelling each other at fixed points. You could think of it like water in a bathtub sloshing back and forth, hitting both ends of the tub simultaneously (really it's continuous reflections overlapping) before the waves meet together in the middle again. This effectively happens on a global scale, electromagnetically, at the speed of an electric pulse.

This field live with radio signals contains the troposphere, home to our fluffy water-filled friends—clouds. Ions from the sun charge the Earth's atmosphere both As this charge builds, it discharges to the planet surface in lightning strikes, each one of them creating an electromagnetic pulse that ripples out through the ground and air at the frequency of the SR—like a bell constantly being rung.

The key discharge is a flow of electrons (negative charge) or positive ions moving between different layers of atmosphere. The ground and ionosphere act as charged plates, negatively and positively charged respectively, the lightning helping to maintain the Earth's electric field by transferring charge between the two.

In this way, the Sun acts like a giant modulator of Earth's electromagnetic environment. Despite the volatility of solar winds and coronal mass ejections (CMEs) from the sun, the SR stays remarkably stable. This is similar to how a guitar string vibrates at a fundamental frequency based on

its length and tension—even if you pluck it harder, it still vibrates at the same fundamental pitch. Still, the resonance conditions can change with different levels of humidity, pollution, and cloud occupation.

This resonance is believed to come at least in part from the qualities of this cavity. We can think of it like a resonant chamber—a matrix whose construct can be pushed and pulled, expanded and squeezed, by gravitational influences outside the Earth's atmosphere. Just like ocean tides, the atmosphere also experiences gravitational influences, pressure variations, and ionic shifts due to celestial forces. These atmospheric tides affect pressure, density, and even the motion of ionised particles in the upper layers of the atmosphere in daily cycles—strongest in the thermosphere and ionosphere (~85 km+). This can impact the Schumann resonance, atmospheric charge, and even vibrational qualities of the air at different times and locations. While solar and lunar influences dominate, we can consider contributory effects from other planets in our solar system, considering resonant patterns across days, months, years, decades, and even millennia, which could begin to corroborate astrological theory through acoustical physics if we consider there to be impacts on human physiology—especially the 'setting' of epigenetic expression in utero and/or early childhood. (I explore this theory in my upcoming book *Quantum Human*.)

When we are considering the effects purely on sleep, we might focus the discussion on localised atmospheric effects and reasons for why sleep direction is important. If the equator and/or east (direction of the rising sun) are of particular importance, we might consider what the eastward direction has in common with an equatorial direction.

For most people who sleep in monophasic, 7–10-hour patterns, the bulk of sleep hours take place in the early morning—past midnight. This would mean that, relative to the person's geolocation, the Sun would already be past its midway point on the other side of the planet, closer to the eastern sunrise than the western sunset.

The gravitational effect on the atmospheric tide means a consequent bulging at the subsolar point (the location on Earth where the Sun is directly overhead at any given time), the Sun's intense radiation heating and expanding the atmosphere. Ionisation from solar activity swells the ionosphere during the day, contracting at night, which could mean there is benefit for our heads to point towards this coming surge. This movement

creates daily pressure oscillations in the upper atmosphere, influencing the ionosphere and potentially modifying how electromagnetic waves propagate—including the Schumann resonance.

This may even mean that there is an atmospheric gradient. As this atmospheric tide bulges and warps, this 'slope' from high energetic pressure to low energetic pressure could mean that there is a subtle difference between an oncoming and outgoing tide—a rising or setting Sun—giving some significance to directional orientation. In some ways, if we are considering gravitational influences, such influences could make misaligned sleep orientation comparable to sleeping with your head pointing downhill.

However, modern sleep patterns are quite obviously different to the schedules of our forebears. With the advent of technology, our routine is pushed into a morning-heavy sleep-in. Before the hour was invented, however—that's right: invented—these cavemen would surely be much more in tune with the rhythms of the sun. Especially before fire was discovered, it's probable that what we consider the difference between AM and PM would have been much more equal. Midnight, theoretically, is the moment when the sun should be exactly on the opposite side of the planet.

This could imply that there are more variables to consider in future experiments, factoring not just geolocation but a very important understanding of *when* someone goes to sleep, and how their night is distributed between PM and AM—pre-midnight and post-midnight. It's possible that for a purely natural sleeper that rests according to sunlight, such as an animal in the wild, the difference between East and West directions could be negligible. However, there is always a consistent waning on the Western side and a consistent waxing from the East. If the East-West instructions from Indian tradition hold water, this would have implications for the nature of North-South orientation and how it works.

Equatorial regions naturally receive more attention from solar activity, being most consistently close to the sun. This may imply a consistent gradient within the Earth-ionosphere cavity, potentially favouring a direction toward a more resonant region. Here, the daytime cavity bulge is thickest, although sleep direction may come with a caveat given around 90% of lightning strikes happen in the tropics. This includes regions around Africa, Southeast Asia, and South America, creating potentially potent pockets of Schumann ringing. This may mean further studies on this

subject ought to be careful with what variables are included, as specific geolocation may play a much bigger part than simply accounting for which hemisphere we're in. Time of year, phase of moon, and current weather patterns could all play a significant part in which direction is best and in what way, and the speculations on optimal sleep direction may comment on which are expected to be best *on average*.

While cavity bulging is predictable in its routines, lightning and atmospheric qualities are less so. There is still a fair amount of clockwork in how celestial bodies like the Sun affect the atmosphere. However, the effects of the Sun are more than just gravitational. Referred to as the solar thermal atmospheric tide, it is solar radiation that periodically heats the Earth's atmosphere, causing global oscillations in atmospheric pressure, temperature, wind patterns, and lightning.

As the terminator line (boundary between night and day) sweeps westward, the sun heats the ground and the lower atmosphere. This heating primes convection: warm air rises, moisture condenses, clouds build. Within a few hours of sunrise, thunderstorms and lightning following in its wake. The sun trails a literal band of storm activity behind it.

This has diurnal (24-hour) and semidiurnal (12-hour) components, propagating tides not just horizontally around the Earth, but vertically—from the troposphere and stratosphere up into the mesosphere and thermosphere, with amplitudes increasing with altitude as the atmospheric density decreases. What I am interested in, however, are the horizontal effects—that which could correspond with sleep directionality. For this, we can take focus on the migrating and non-migrating tides.

The non-migrating tides propagate independently of relative solar motion, moving any which direction, influenced by topography, convections, and land-sea contrasts. The migrating tides, however, consistently move westward, fixed with the direction of the Sun's movement relative to Earth—i.e. due to the planet's rotation. The amplitude of this tide can be more pronounced in certain geographic locations due to local conditions and resulting constructive or destructive interference. Both the gravity and solar radiation can modulate the characteristics of the atmospheric cavity, tensioning it regionally into a density gradient.

We have already covered how the 'ceiling' can be raised gravitationally, stretching the resonant chamber to alter its vibrational qualities. However, the waves that manifest as variations in atmospheric pressure,

temperature, and wind—while much lower in frequency than human brainwaves (approximately 2.31×10^{-5} Hz)—may not need to be perfectly matched in order for there to be an implicatory correlation or alignment. These mechanical waves do subtly modulate the ionospheric boundary conditions, especially its height and conductivity, so are sure to constructively interact—at least under certain conditions or in particular regions.

We can think of the vibrational medium—that is, our atmosphere—like a drum skin being tightened and loosened. Some tribal drummers will warm their drums by the fire before playing, which we might liken to the Sun's solar energy heating and ionising the Earth's atmosphere. Now, gathering that the ionosphere is dragged into a bulge by a great gravitational mass, we see that the medium for EV wave propagation becomes *anisotropic*—that is, it has different properties in different directions. In contrast to *isotropic* media, where properties are uniform in all directions, anisotropic media have distinct directions of measurement that yield different results. This kind of directional dependence is particularly evident in single crystals of solid elements or compounds—where atoms, ions, or molecules are arranged in regular lattices. As an example, wood is anisotropic, being easier to split with the grain than against it. Meat is another substance with a grain, and if we consider a human body to be more than a lump of flesh, we will see that tissue conducts better lengthways, with fascial tension and collagen alignment corresponding with structured water.

The fascia—the connective tissue network that wraps every muscle, organ, and even cell—is rich in collagen, which is piezoelectric. This means that when you move, breathe, or stretch, you're literally generating tiny electrical signals. In turn, these electrical fields can influence cell behaviour, healing, and even possibly wave coherence across tissues. Some researchers propose that the fascia acts as a liquid-crystal, semiconductive matrix that not only supports physical structure, but transmits energy and information like a living circuit board.

This has huge implications for a variety of functions within the body, especially if it is responsive to the vibrations of our environmental matrix. Indeed, could sound, EM pulses, or the Schumann resonance reinforce this fascia-based bioelectric network? Is the fascia a living antenna for internal and external harmonics?

The Global Clock

As the world turns and humanity sees another day, there's a lot of predictability in the patterning of electromagnetic signatures and influences. While we could point to ancient astral clocks for greater detail, such as the science of astrology (where mathematics meets interpretation), we might remark more on the principles that govern these changes.

The cavity's resonant properties (resonant frequency, amplitude, Q-factor, and spatial modal distribution) depend on the **geometry**, **conductivity**, and **height** of the ionosphere and on the **distribution of lightning sources**. Other factors can include the **geography**, the **conductivity of the ground**, **man-made interferences** (e.g. power grids, transmitters) and regional signatures, and **local lightning**. **Solar storms** and **geomagnetic activity** can swamp all of the above; strong solar events *massively* reconfigure the ionosphere, injecting currents (auroral electrojets) that dominate ELF/VLF behaviour.

Along with our speculations on celestial bodies and gravitational/vibrational influences outside of the Earth's atmosphere, we can examine the daily cycles with special interest in the nightly hours, given our subject of focus is sleep. So, what exactly is said to be happening when the sun and moon are at particular angles to our relative position? What has been believed historically, and how do those beliefs measure up to more scientifically validated observations about our planet?

In some esoteric systems…

Midnight is when unseen forces are strongest. Midnight is when the sun is on the other side of the planet, farthest away. Moon depending, this may be when the resonant matrix is at 'low tide'. It could potentially reduce overall atmospheric energy, but it could also compress it. This is when body temperature begins to drop more dramatically, and sleep architecture begins to change, to favour REM sleep over slow-wave.

1–3pm is what the Chinese call "liver time"—the most powerful time of the night for detoxification, blood renewal, and emotional processing. In Western folklore, this time is considered an hour of potential restlessness, where the hauntings of spirits are most common.

3–5am goes by many names—The Witching Hour, Brahma Muhurta, and Hour of the Wolf. Many religions use this sacred pre-dawn hour for clarity

and prayer. This time of morning appears in most major religions, while scientists observe it as the peak of vivid dreams, where cortisol begins to rise and the sun approaches the new horizon.

While at this time it is still considered the middle of the night, pre-dawn changes begin to occur. At higher altitudes, photoionisation begins to creep in, leading into twilight. This is when the thermosphere is at its lowest temperature, and dynamic shifts begin to occur that reconfigure the tides and winds. This is when ionospheric geometry is most malleable as the sun angle crosses the terminator line—the boundary between day and night.

5–7am for the Chinese is "large intestine time"—the hours of elimination and cleansing. For the Aryuvedics, this is the end of Brahma Muhurta, which marks a transition into kapha (heavier) energy.

After sunset, the D layer of the atmosphere—the lower ionosphere, which is created by sunlight knocking electrons off air molecules—loses many of these electrons. At night, in the absence of sunlight, the free electrons are able to recombine with the positively ionised air molecules, which effectively makes this electron-based D layer disappear.

Without this D layer, the entire composition changes. No electrons means better thoroughfare for radio signals. The size and quality of the atmosphere changes as soon as the sun goes down,

Within the ionosphere, there is a particular variable altitude where radio waves (ELF/VLF) appear to bounce back to Earth. This is called the effective reflection height, which is considered a kind of 'mirror'. With a thinner D layer, the recombined electrons aren't as many to absorb or reflect radio waves, raising the effective reflection height and creating clearer, more spacious acoustics. This is measured by a change in Q-factor, where a high-Q environment provides a cleaner, sharper sound—ringing clear like a bell, where vibration can be held for a long time. Low Q, on the other hand, would mean sounds are duller, damper, and murkier. In sound engineering, this is considered to be more 'lossy', referring to the loss of audio data and reduction in sound quality. In this low-Q environment, sounds die out quicker, like they're being dampened, producing a shorter 'ring-down'.

So in this decay of sound, we understand that resonance may only go so far, although it tends to go farther at night-time without the 'noise' from what

the sun is stirring up in the atmosphere. Does it make sense now that sound seems to travel more at night? Perhaps it's not just the lack of birds and bees, but the sound of the sun itself.

This may mean that, if the human brain is coupling with electromagnetic waves, night-time tends to provide the cleanest, stillest, most resonant conditions. Perfect antenna weather.

This could easily get complicated by weather patterns, even implying, perhaps, that we could have weaker or more confused signalling/orientation during storms. Night-time also has different lightning patterns regionally. However, such things would have to be examined more carefully.

The gravity from the Moon, whether it's visible in the sky or not, creates small atmospheric tides that play a part in modulating the upper-atmospheric density and winds, as well as affecting the height of the ionosphere, which changes the cavity's parameters and qualities. And how do the phases of the Moon change things? With its effects on atmospheric tides and from reflection of light, it's even able to affect ionospheric conductivity—the ease for electric currents to flow through the ionosphere. A full moon with lots of light and presence will quite literally give the night more electricity, increasing its conductivity, further increasing Q-factor, with large-scale potentials on the order of ~250,000 volts between Earth and ionosphere. The density waves from an overhead moon shifts the plasma distribution in the ionosphere, while the moonlight adds a tiny ionising effect to the sodium layer of the atmosphere. Now most people wouldn't even know we *had* a sodium layer in our atmosphere. But this is a thin ocean of floating sodium particles that hangs out around 90km above sea level. Said to be created by the dissolution of meteors as they burn up and fizzle out in our atmosphere, these atoms are excited by sunlight and solar wind, emitting radiation partly in the form of visible yellow light. This contributes to the phenomenon of 'air glow', although I have further interest in speculations on this.

If we are likening the Earth in any way at all to a brain in this essay, then sodium sticks out to me as a chemical that's critical for neural processes. Neurons in the brain only fire when sodium ions flow in suddenly. This doesn't create electricity, this *is* electricity. The thin layer of sodium that is highly photo-reactive, ionised and morphed by even a tiny lick of light, which increases conductivity and modulates the ceiling of the resonant

chamber. This means the full moon effectively polishes the sky—our charged, electric ceiling—creating cleaner reflections of radio waves.

When sodium atoms get ionised, you suddenly have free charges—light, mobile electrons and heavier positive ions. These free charges can drift, oscillate, and carry currents when acted on by fields. This means that the electric fields between Earth and ionosphere, the geomagnetic field, and the passing EM waves are constantly pushing, pulling, and guiding those ionised sodium particles.

The sodium layer itself becomes a kind of matrix with an electromagnetic properties. Its electrons flow up and down between hemispheres, spiralling in a corkscrew around north–south geomagnetic field lines. This is what is being observed in the aurora lights in the far north and south; but even when unobserved by the naked eye, this illustrates that the magnetic lines are not rigid bars, but flowing ribbons of energy. They bend, stretch, and reconnect—a window into both the dynamic and the power of massive bands of spiralling electrons.

On the ground level, we do not directly sit inside this electron flux, although we are inside the electromagnetic fields they generate. It's possible that our body aligning with this while we sleep may couple more easily in a north-south orientation than an east-west orientation. We know circadian rhythms, melatonin, and EEGs are sensitive to EM environments. If the resonant "quality" of the cavity changes (Q-factor, reflection height, background coherence), then surely differences in alignment—even subtle ones—could change sleep depth, dreams, or even health over long exposure.

Both awake and asleep, we see consistency in experiences across cultures for sections of the night. Given the atmospheric resonance would be morphing and reshaping through the night, it makes sense that predictable routines of sun and moon would be having routine effects on the human body. If the mechanism, perhaps learned by evolution, is gained efficiency through an alignment between bodily and environmental frequencies, the body's processes and priorities may change accordingly. Like the shadow of a sun dial, slowly morphing matrix may be conducting cells and systems to its own rhythm. As the pitch goes up and down, certain organs—which have different gene expressions and therefore different frequencies across the body—will activate. If our biology is indeed in tune with the Earth,

there would have been plenty of time for the human body to evolve and adapt so that it could make use of the spectrum of sound, energy, and information that wanes and waxes. Many fish are entrained by the tide, with evolutionary adaptations allowing them to tolerate rapid changes in salinity. Perhaps we are tidal creatures through and through, our cells like bells or tuning forks that come alive in sequence as the music changes. A 24-hour song played by Mother Earth herself, our biology dancing to it.

Brainwave modulation is when the neurons fire together at a specific frequency. This tends to happen in moments of deep focus, while scattered coordination means focusing becomes more difficult. Now the pulses of neurons all over our body

But one must wonder—what about rhythm? What if we become out of sync? Must we surf these waves or can we ride above them? People often feel high when they haven't slept much.

Radun: The Golden Wind of Awakening

There is a lesser-known teaching found in some traditional teachings of yoga, Vedanta, solar yogic, and deeper esoteric teachings, which speaks of a pre-dawn solar wind that affects both mind and body. As it was to me, it can be described as "a solar breath that precedes physical light".

The aforementioned *Brahma Muhurta*—"God's Time"—takes place nightly, approximately between 3.30 and 5.30 in the morning. At this time, while the world is still asleep, the universe itself is invisibly alive, and the 'prana' (vital energy) from the Sun becomes most accessible—not so much to the body as to the soul. For this, the sages say, "Before dawn breaks in the sky, let it break in you."

According to Vedic philosophy, the early hours are considered when the body's energetic pathways (nadis) are cleanest and most open. Because the mind has not yet been intercepted by the chaos and busyness of the day, it is naturally clearer and more receptive. At this time, any intention, meditation, or creative act is said to take deeper root in the energetic field—like planting a seed in fertile energies that later grows and flourishes. This is why the likes of yogis and spiritual teachers use this time to meditate, pray, set intentions, or centre themselves for the day ahead.

This is said to be a connection with a solar wind that we can 'tune into', allowing us even to purify and cleanse both mind and body. With this clear channel of spiritual connection, it works for some people as a good time to open the heart for forgiveness, resetting, or even connect with a creative energy.

While the term Radun is not widely used, the concept and related practices exist across a number of different cultures. Sūrya Prāṇāyāma is one—solar breathing—maximising the effects of the invisible Sun on the subtle body. In Gnostic teachings, there is mention of the "Solar Christ" and the mysteries of dawn, channellings that speak of the "supramental Light of dawn", and a number of other similar yogic teachings that connect planetary vibratory fields and 'sacred sounds' with effects on the body and mind.

While the rational mind may unpack all this as variations of acoustical physics, the sheer complexity of a planet in communication with all its inhabitants should not be underestimated or simplified. This, I think, begins to only lift the hatch on the true nature of global interconnectedness.

On the subject of connecting with informational fields, I hope even the sceptics will give the benefit of the doubt to the practices of some of history's greatest brains.

As explained by sleep neuroscientist Matthew Walker, you're three times more likely to solve a problem after sleeping on it. Given even closed-eye resting has benefits for the brain and allows it to fast-track processing, this could be explained very logically. However, in the light of the potential wonders of the theta brainwave, we might question whether there are other, less easily explained mechanisms and effects behind the brain's creative processes.

Famous minds from history—the likes of Thomas Edison, Salvador Dali, Albert Einstein, Aristotle, and Nikola Tesla—reported using techniques that put them into and pull them back from the edge of sleep in order to get inspiration and solve problems. Edison would famously fall asleep with a steel ball in his hand, Einstein with a spoon, keeping a metal plate on the floor beneath. As they drifted off, the ball or spoon would slip from their hand and crash noisily into the plate, wrenching them out of theta before the brain realised it was already in alpha. At that point, they would hurriedly scribble down what they remembered before the brain disposed of this other-state information.

Techniques like this would allegedly allow them to access creative insights they didn't have while awake. This is known as the hypnagogic state, attained through theta brainwaves that appear in the early stages of sleep as well as in REM.

This heightened creativity and intuition is traditionally explained as a cross-activation of regions and networks in the brain that don't usually communicate while we're awake. However, others have speculated that it's actually allowing us to tap into a field of information that exists outside of us.

But do we have definitive proof of this? Individuals like Dr James Gates and Danny Goler say yes—finding what many consider to be indisputable proof of an informational, computer-like 'matrix' as the substrate of reality. If this is true, could we really be tapping into a universal information field routinely, with nothing but our neural machinery and a few hormones?

The Red Crística

Well into writing this theory, a conversation with a friend led to the discovery of the ***Red Crística.*** With its original name in Spanish, in English it's called the Crystic Grid—or more formally, the Planetary Christ Consciousness Grid. Popularised by Drunvalo Melchizedek and others, this takes a more holistic spiritual approach to the same or similar kind of concept for which I am examining the nuts and bolts.

The Red Crística is described as a global energetic network said to influence the evolution of human consciousness. Conceiving of a giant interwoven energy grid, it's believed—tying in ancient lore from indigenous and mystical cultures—that it's formed by crystalline nodes or 'energetic channels' between sacred sites. From this, it delivers information, energetic activations, or spiritual downloads to those receptive to it. But even more than that, it's considered a template for organising matter at all levels, from atoms to living beings—the physical expression of the sacred code of creation.

The evidence for this is typically experiential and anecdotal—things like synchronicities and shared visions. However, the theory also draws on the geographic positioning of ancient structures that share incredible similarities and patterns that defy history's records of what knowledge and

interactions different cultures were said to have had. Sites like the Great Pyramid of Giza, Stonehenge, and temples and structures from places like Mexico—aligned across the Earth in direct lines and spaced according to the Golden Ratio—make a convincing argument for something mystical or beyond the limits of unanimous scientific agreement.

While there is little empirical evidence for this energetic lattice in the way it's presented, it does tie in with more robust models and discoveries like the Schumann resonance in ways that give it more credibility than the claims alone might muster. Given the general alignments with the evidence presented in this essay, we may give it the benefit of the doubt and consider that there may be some contribution to this conversation through a less robustly scientific lens.

After all, the claims that the Earth has its own set of 'chakras' may again be explained or perceived through less abstract terminology, considering the subterranean bodies of crystal and other geological phenomena that make certain areas around the world special. While I tend to reserve patience for the claims of generic and often undefinable 'energy' the spiritually minded often refer to, we can examine geomagnetic anomalies and unusual geological subterranean bodies as potential evidence for what could be creating interesting and even unique energetic fields.

While there is no absolute unanimity on the specifics, it's been claimed and supported in various circles that the Earth's chakras can be found in notable, specific locations. For example, the root chakra at Mt Shasta in California—a volcanic mountain with high geomagnetic variation, strong piezoelectric quartz content, and frequent lenticular clouds; the sacral chakra at Lake Titicaca at the Peru-Bolivia border—a high-altitude tectonic basin with magnetic anomalies due to surrounding mineralised rocks. Then we have others from the likes of Australia, England, Egypt, and Tibet, often characterised by mountains and/or zones of tectonic interest, and sometimes marked with ancient structures. Anomalous magnetic readings have often been reported in these areas, although it's difficult to verify this as a consistent and causal quality when so few formal studies have sought to investigate this theory.

Buckminster Fuller, a 20th-century architect, engineer, and systems theorist (creator of the geodesic dome), invented the Isotropic Vector Matrix (IVM). This was his mathematical model describing the most balanced way to fill space with vectors of equal length and angle—a purely

geometric/structural construct related to how energy and matter could organise in 3D space. Various new-age authors, such as Drunvalo Melchizedek in his book '*The Ancient Secret of the Flower of Life*', took Fuller's work and repurposed it to mathematically explain the structure of planetary energetics.

"The gravitational field will ultimately be disclosed as ultra-high-frequency tensegrity geodesic spheres. Nothing else." —Buckminster Fuller

Fuller was hailed by some as one of the greatest minds of history. While considered unconventional, the geometry he worked with was said to be applicable to cosmic, energetic, and even mental systems. In his 1975 book '*Synergetics: Explorations in the Geometry of Thinking*', he fathomed a cosmological model and philosophy of design that meshed systems of energy, geometry, and thought, proposing that complex behaviours can emerge from simple geometric relationships. While he was no proponent of the Red Cristica (which didn't exist until after his death), his work commented directly on planetary energetics, asserting itself as one of the key modern bridges between scientific geometry and spiritual proposals. His work was seen as an "exhaustive study of the patterns and structures that are inherent in energy dynamics" (Holofractal, Reddit), considering structure as a manifestation or representation of energy. With relationships between straight-edged geometry like triangles and symmetrical clusters of spheres, Fuller tinkered with what appears to be the architecture of the universe itself. He argued that energy and geometry are not constructs—they're *behaviours*. Aligning with Einstein's proposal of $E=MC^2$, the idea was effectively that energy is geometry in motion, and geometry is created by energy in motion.

But Fuller was far from the first to take a deep interest in sacred geometry. Going back millennia, philosophers and pioneers like Plato, Pythagoras, and Vitruvius integrated similar geometries into their work, as did Arabic and Gothic architecture. Across places like ancient Egypt, China, India, and Mesoamerica, it was deeply ingrained in some cultures to apply intimate knowledge of sacred geometry to their city planning, astronomy, and spiritual practices. Many ancient sites are astronomically aligned, geodetically aligned (placed on specific latitudes or meridians), and aligned to each other. Some individuals have recognised that some of the oldest and most enigmatic structures are sometimes distributed in geometric or proportional layouts, finding observable and intentional triangulations

between temples, megaliths, and pyramids. We might ask the question: why was this spatial harmony of such great interest, to the point where mind-blowingly immense efforts were made in their construction?

It's not my intent to widen the scope of this essay to a deep dive into the research and anomalies that might corroborate the exact locations and their qualities. However, by principle, there are a number of real, well-understood phenomena such as global electrical circuits, tectonic stress and terrestrial piezoelectricity, and acoustic and gravitational resonances that make something like the *Red Crística* a plausible concept. The size, shape, and makeup of the very planet we walk on seem to have played a role of significant importance to ancient cultures, and we may just be rediscovering today that understanding and alignment with these could have huge advantages and implications.

While the mind reels at what energy could be harvested by monolithic constructions in specific geographic locations, we might consider how our own bodies have been constructed to make use of the invisible and likely underestimated energies of our planet.

The Acoustical Nature of Earth Consciousness and the Universe Beyond

While there would no doubt be huge reluctance from many in the scientific community to entertain the notion of planetary consciousness, there are striking parallels between the brain's electrical activity and the Earth's Schumann resonance, both in terms of electrical discharge dynamics and signal networking. If we compare neural activity to lightning and brainwaves to Schumann resonance (the resonant product of electrical discharge), we see deep structural similarities in how energy flows, resonates, and organises into functional patterns.

Both the brain and Earth's atmosphere rely on electrical discharges that create rhythmic oscillations. While lightning occurs when the charge within a cloud polarises, the neuron maintains this polarisation in a state of rest—ready to fire at a moment's notice. Both will polarise in preparation for discharge, reaching a threshold to then depolarise, shooting their electrical signal, before resetting to a polarised state.

Lightning's zigzag pattern toward the ground is characterised by many changes direction, following what are called 'step leaders'. Just like brain signals, they follow the path of least resistance, sometimes taking multiple forks in the road. Charges in the air and charges in a neuron both follow principles of electrical attraction and repulsion, dictating not only when a discharge occurs but which path it takes. Just as step leaders seek out a connection, neurons don't just fire randomly—they "search" for the strongest, most conductive path. Could this mean that lightning can be seen as a kind of atmospheric "thought", its electromagnetic shockwaves comparable in some ways to brainwaves?

Despite any perceived similarities, likening the Earth to a giant brain is likely too abstract for a direct comparison. This doesn't necessarily rule out the idea of planetary consciousness, but situates it in the realm of analogy—much like comparing humans to jellyfish, which possess neurons but lack a centralised brain. Another common parallel involves ocean water and human blood plasma: both are electrolytic fluids rich in mobile ions such as sodium, chloride, magnesium, calcium, and potassium. These ions enable electromotive processes—supporting nerve transmission and muscle contraction in the body, and in the ocean contributing to electrical conductivity, global electric circuits, and interactions with Earth's magnetic field. In their own domains, each fluid plays a role in maintaining a form of homeostasis, with the ions present responsible for

As both are complex electrical bodies, drawing comparisons can be a fascinating exercise—and not completely without reason, either. Both the human brain and the planet's biosphere are inherently mystical, and with the emergence of quantum communications as a subject we're still working out, we might consider reassessing what Consciousness really is.

With the aforementioned ions responsible for every single electrical transmission in the human body, from a sparking thought to the twitch of a finger, it might not be so farfetched to see this shared foundation of electrical potential as important if not critical. Given they are so abundant in our vast ocean reservoir, is this not the basis for life itself on planet Earth? If all life supposedly began in the ocean (as the story goes), the implication for the ocean to effectively be built of ionic fluid could make us wonder if the planet's biosphere—ground, sea, and air—could be analogised as a circuit board of monstrous complexity. Our atmosphere, soil, bodies of water, and collections of living organisms all appear to be playing a part in forming a network of electrical currents and gradients. But

electricity is just the start, and once we factor in vibration and quantum coherence in a shared field, even the most profound of Earth's electrochemical processes may just be the surface layer of the total body of coordination.

Given we still know very little about any shared or independent intelligence of our planet scientifically, hypotheses here can be treated as a plaything. While it's possible that the biosphere of the planet operates with some kind of unified or coordinated intelligence, including with the use of mycelial and root networks, bodies of water, and individual brains, it's possible in speculation that even the soil and rock beneath us play a part in a kind of motherboard circuitry. The ground and both its biological and non-biological properties affect or are affected by planetary resonance, and so it could be considered to share in the shaping of atmospheric acoustics. It plays a crucial role in conducting, storing, and shaping electromagnetic waves, just as a brain's structure influences its own electrical activity.

In the Earth, this can include water, metals, and minerals. Even soil bacteria like Geobacter and Shewanella have been found to conduct electricity using microscopic nanowires made of proteins. These bacterial networks form an underground biocircuit, possibly altering how electromagnetic waves propagate through the ground. Large bacterial colonies can generate micro-scale electric fields, influencing the local electrical environment of the soil, which might subtly shape how Schumann waves interact with the Earth's surface.

It's suggested that low-frequency electromagnetic waves like the SR may stimulate bacterial growth or affect metabolic processes, contributing to nutrient cycling, decomposition, and broader ecosystem health. This likely has implications for impacts on the human brain and body during sleep, and could hint at a profound impact of location during both our waking and sleeping hours.

Electromagnetic waves can alter charge distribution in the ground, affecting processes like lightning activity, volcanic behaviour, or even tectonic movement. It's even found that pre-seismic electromagnetic signals occur before earthquakes, hinting that planetary resonance may interact with geological stress. In this way, the Earth's crust may be acting like a neural substrate—information-containing 'tissue' that conducts or contributes to a global signalling system.

Of course, any activity in the brain is characterised not just by the flow of electrons between neurons, but also by the activation and physical movement of neurotransmitters—as is their job. As the circuitry of the human brain is therefore not completely static, and is actually rather dynamic by employment of selected neurotransmitters and hormones, we might expand this view to consider the planet as a whole—and even the universe beyond—as a kind of moving, shifting circuit. But instead of just thinking in terms of electricity and ion flows, we might begin to incorporate the likes of gravity, pressure, and electromagnetics.

Curiously, maps for where and how the individual is impacted by Schumann activity and EIC vibrational field could already be substantially documented and accessible through **Astrocartography** theory. This is effectively astrology applied geographically, looking at how the relative positions and movements of celestial bodies affect one's mood, functions, and life patterns. While this kind of theory has previously been dismissed as "woo-woo", could this perspective on gravitational EIC morphing begin to explain this abstract connection between planets and humans?

Even the broader consideration of the stars far above could begin to make sense. While the constellations themselves (Taurus, Aries, etc.) are too disjointed, inconsistent, and technically inaccurate to stand alone as specific causative influences, we can still acknowledge the *correlative links*, especially given annual solar cycles correlate with planetary behaviours closer to home. However, we could still reserve some causative possibility for the colossal interstellar energies and unexplored directional influences between celestial bodies like stars through interstellar magnetic fields and plasma structures. Just like how they appear visually comparable to connections between neurons, on the scale of giants we also see movement through these networks. As plasma streams between stars through gigantic channels, it generates magnetic fields that influence their surroundings. Sound familiar?

We are living in a giant cosmic web, not completely unlike bacteria living between mycelial threads. While the theory behind astrology may be abstracted and commonly misrepresented, the active forces that shape both planetary and biological events may be very real. In this cosmic dance of plasma and magnetic fields, we may begin to see 'structures', such as the Cosmic Microwave Background Radiation (CMBR), not as evidence for the Big Bang, but as a giant cymatic pattern maintained by the vibrational qualities of our observable universe. If this has some truth to it, our

understanding of gravity and celestial movement is due for a rewrite, as this quite literally has the power to move and reorganise stars and galaxies—which should not only give credibility to the idea that stars millions of light years away playing some part in what goes on down here on Earth, but could support the idea that a continuously shifting universe is not a product of dumb mechanical physics, but a larger play of vibration and even consciousness in our greater universe. And if we pull back to the microscopic scale, similar principles could apply to the like of neurons readjusting to accommodate for changes in brain activity.

The CMBR exists as a permeating, universal field, characterised by an abundance of energy and vibration. While this is only a simplified view of a complex cosmic ecosystem, we might pay homage to this divine orchestration through an admission of relative ignorance.

The Biology of Alignment

The default, simplistic expectation for explaining any correspondence with the cardinal directions is analogising the human body as a glorified compass. Our iron-rich blood and magnetic field aligning with the iron-cored Earth and its own magnetic field would be an explanation that's conveniently accessible to the masses, although by closer inspection it does not seem entirely consistent.

If indeed we must point equatorially, or even eastward, then this magnetic hypothesis does not hold true—at least not as the primary consideration. It could well be true that there is a magnetic element, or in fact a number of different influences that could be operating independently or in conjunction with one another—or even at odds with one another.

But let's get a few things clear here.

The Earth's magnetic field behaves like a toroidal–poloidal structure, meaning it has loops of field lines both inside and outside the planet. It's believed that circular flows of molten, conductive iron in the outer core generate magnetic field lines from a mix of convection, electrical currents, planetary rotation, and Coriolis forces. This spiralling conductive fluid sustains a **self-organising magnetic field** that emerges from the South Pole, arcs through space, and re-enters the planet near the North Pole. This

creates a toroidal (doughnut-shaped) circulation of magnetic energy both inside and outside the planet.

Here's the twist.

The north-seeking end of a compass point, which is a tiny magnet, is defined as a 'north' dipole magnet. Given opposites attract, it is pulled toward a magnetic 'south' polarity, which is geographic north to us.

These magnetic poles move over time—around 40–50 km per year. At ground level, its field lines run from south to north. But while our bodies might not be exactly comparable to ferromagnets, could there still be something about this magnetic field and its direction that is affecting our sleep?

Various animals are known to be directionally sensitive to the Earth's magnetic field, aligning during sleep or using it for navigation purposes. Likewise, sleeping humans may align with the geomagnetic flux to most comfortably couple with natural flows of energy.

The human body is known to conduct electricity and can act like a biological dipole antenna—sensitive to certain ELF or VLF waves. As ELF patterns are generated along the equatorial belt, an optimal coupling with a north-south orientation could make sense outside of magnetic orientation. However, if east-pointing sleep orientation is also conducive for maximum sleep quality, while west-pointing orientation is disruptive, then we should be considering our biological response to factors associated with the Earth's spin.

In accordance with the hypothesis that the Earth-Sun dynamo creates a westward-moving atmospheric tide that somehow affects human sleep quality, one plausible connection could be a **vibrational gradient** that can correspond or conflict with our bodies' directional flows. The most likely mechanisms, independently or in conjunction, include the body's electrical systems and the vibrational and/or piezoelectrical qualities of our cells and cellular componentry. Our individual cells are both electrochemical machines and vibrationally tuned entities, capable of interacting with frequencies through mechanisms like DNA electron cloud oscillations, microtubule vibratory coherence, voltage-gated ion channel tuning, and biofield-sensitive epigenetic modulation.

Each of these comprises a complex set of hypotheses to explore, so let's address them one by one.

DNA electron clouds are collections of vibrating and oscillating electrons around the base pairs of our DNA helix. An environmental resonance could very well have the capacity to influence the oscillations of these clouds, possibly affecting the mechanisms of our DNA and our cells at large. Locally, this may impact our DNA's ability to repair itself, express certain genes, or synthesise proteins, although it could also have broader influence as well. If every cell in our body is affected by our external environment in this way, this vibration could either support or impede the body's cellular processes during sleep, especially regarding repairing and cleansing, which are considered the major functions of sleep.

Microtubule vibratory coherence refers to synchronised oscillations of quantum vibrations within microtubules, which are components of the cell's structural skeleton. Microtubules are scaffolding structures inside cells, playing a core part of the cells' overall resonance which corresponds with the harmonised resonance of other cells. These are now considered to play a part in biocommunications and even brain states.

Voltage-gated ion channel tuning refers to the ability of our cells to modulate differences in electrical potential. The ion channels in the membranes of cells can open or close to conduct electrical flow—increasing or decreasing neuron firing, altering rhythms in the heart and muscles, and playing a part in conducting hormones and neurotransmitters.

Biofield-sensitive epigenetic modulation refers to the relationship between our genetic expression and our external environment. Our DNA can change its expression from a variety of signals, and electromagnetic fields are considered to be a potential stimulus for this. Positive coherence with atmospheric resonance could enhance healing, immunity, sleep, or emotional regulation; discordant fields could do the opposite.

Now, these mechanisms mostly relate to the cell on a local level, and aren't always to do with the body as a whole. It could be possible that a person's geographical environment could be more conducive or less conducive for cellular function—or simply different in character. This is not irrelevant, although we need to consider the body as a whole—its functions and communications—in how its physiological rhythms may respond to a potential atmospheric gradient.

If the Schumann resonance and/or west-moving atmospheric tides align with or entrain human waves, we might consider which broader biological systems are most likely to be influenced.

- Barometric (atmospheric) pressure changes may subtly affect cerebral spinal fluid dynamics or blood flow.
- Mechanical pressure also acts on the vagus nerve—a highly electrical component of the nervous system that is reliant on ionic balance.
- Changes in air ionisation (from thunderstorms, cosmic rays, Schumann peaks, etc.) affect negative vs positive ion balance, which can affect a number of systems in the body, such as heart rate variability and autonomic balance (sympathetic vs. parasympathetic).

The vagus is one of the longest nerves in the body, extending from the brainstem. A drop in barometric pressure can alter tissue oxygenation, intracranial pressure, and fluid balance, all of which can influence activity and modulate tone of the vagus.

This demonstrates how sensitive the human body is to atmospheric changes. It may hold no inherent implication that sleep direction is significantly important, although it does make the hypothesis more plausible. If optimal sleep health comes from planetary alignment, it's likely that we should be looking at interconnected systems that, by assumption, extend vertically throughout the body. The more obvious suspects might be the nervous system, fascia, skin, and the endocrine system.

While each of the aforementioned are brimming with opportunity to explore in minute detail, I would like to turn the camera toward the endocrine system on a gut feel. These glands, to me, represent the deepest enigma of the human body. Considered key to spiritual activation, these glands are highly vascularised and innervated, and some studies show that the pineal, thyroid, and adrenals are all responsive to geomagnetic activity and solar storms.

While the pineal is extremely sensitive to piezoelectric pressure and EMFs, there's emerging evidence that other endocrine glands are also responsive to subtle vibrational influences. As a quick example that's familiar to me, I'd like to call upon the famous yet hard-to-find study by Dr Heidi Yellen on the vibrational frequencies of different fabrics. According to this study, and corroborated indirectly by others, everyday fabrics are considered to have tiny yet influential vibratory qualities, where natural materials like linen

and wool are said to have near-magical properties that can help to heal or recharge the body. Studies on animals wearing pants of different fabrics have proven this to some degree, where low-frequency, synthetic materials have had a negative impact on fertility and living sperm count. It might not be so strange, then, for our sensitive internal glands to be affected in a number of ways by the qualities of our environment.

The Physiology of Meridians

Given existing theory on sleep direction incorporates Eastern lore from the likes of China and India, conversations and considerations could and likely should incorporate Eastern physiology theory.

Qigong, Traditional Chinese Medicine (TCM), and Vastu Shastra suggest that energy flows in predictable patterns, just like the Earth's electromagnetic fields. According to Qigong theory, the *Du Mai* (Governor Vessel) and *Ren Mai* (Conception Vessel) are key meridians running through the human body, regulating nervous system energy and sleep states. If these meridians resonate with Earth's electromagnetic currents, then the direction of sleep could enhance or obstruct natural energy circulation.

In terms of scientific parallels to meridians, the human body generates and conducts ionic currents via the nervous system, blood, and fascia. In Qigong, the *Du Mai* meridian is said to conduct energy from head to spine to feet, resembling the flow of cerebrospinal fluid (CSF) and the vagus nerve's activity. If bioelectricity moves head-to-feet, then head toward the equator might enhance resonance with Earth's charge, possibly impacting sleep depth, brain activity, and even melatonin cycles. In terms of neural signalling, motor signals travel downward from the brain to the spinal cord to muscles, while sensory signals travel the opposite direction. The vagus nerve, which plays a major role in parasympathetic activity ("rest and digest" functions), runs from the brainstem down to the abdomen. This already could provide a strong lead for understanding resonant correspondence and harmonic ionic flow.

However, it's the heart that generates the strongest electrical field for the human body. The toroidal field it produces surrounds the human body, extending far beyond the head and feet. Both Eastern and Western

literature vouch for this electric field, which speaks of bioelectrical energy that circulates vertically along and around the body.

The human body is a conductor, absorbing charge from the environment. Grounding studies show electron uptake from the Earth into the body, suggesting a dynamic charge exchange. No firm evidence confirms a strict head-to-foot charge flow, but some researchers propose a subtle bioelectrical gradient that could either correspond or conflict with influential external energies.

So, what else could be going on?

Musical Cellular Cascading

Fascinatingly, cells throughout the body are independently tuned to a slightly different epigenetic expression. No two cells are exactly the same. Proven in experiments by Dr Bruce Lipton, it's ***the environment*** that causes a stem cell to grow into its function and surrounding purpose—whether that's in the liver, the heart, or the toe. Each epigenetic tuning represents a different tuning of literal sound frequency—a unique note played by the unique DNA setting. Logically, it would be expected that, across the body, a higher and lower 'note' is played by cells at different ends of the body—a high and low end to the body, vibrationally speaking. This harmonises with ancient systems like the chakra model, which describes energy centres (correlating to some degree with the endocrine system) in terms of vibrational increase further up the body.

DNA bases absorb and emit electronic and vibrational energy in slightly different frequency bands. Their stacking and spacing also create electron clouds that can oscillate at quantised frequencies, potentially forming a vibrational "barcode" for gene expression. This means that, because of the DNA's quasi-crystalline structure, it behaves a bit like a resonator or tuned antenna. It means that DNA base pairs (A, T, C, G) absorb and emit energy only at specific electromagnetic frequencies—like how guitar strings only play certain notes. In essence, DNA isn't just code—it's a tuned instrument: oscillating and possibly communicating electromagnetically at different levels of organisation.

A head-to-toe gradient in epigenetic expression may correspond to a head-to-toe difference in resonance receptivity, which could, under ideal

conditions, entrain with the external Earth's vibrational gradient—especially if you're aligned with the wavefront (e.g. head pointing east or toward equator). This makes speculative but reasonable room for a body-wide vibrational entrainment mechanism.

While the Schumann resonance doesn't have a straightforward 'high to low' gradient, there is a gradient of field intensity, phase, and amplitude.

Could amplitude or intensity gradients in the Schumann field align with subtle resonance differences between ends of the body and gene expression patterns? The body has bioelectrical gradients as well as a vibrational gradient, seemingly. If there is coherence between the external environment and internal tissue oscillation, this phase or frequency alignment could enhance or support biological rhythms, repair and regeneration, intercellular communication or re-coherence, and even types of entrainment that could extend to quantum communications planet-wide.

With a 7.83 Hz frequency, the body would be receiving 7.83 electromagnetic pulses per second, 469.8 per minute, 28,188 per hour, or 225,504 during an eight-hour sleep. Electromagnetic waves propagate at the speed of light in a vacuum; in human flesh, it's reduced to an average of a cruisy 215 million metres per second. Naturally, the type of flesh determines the speed, and there is a notable difference between muscle, fat, bone, and fluid.

Bioengineering professor Gerald Pollack's discovery of Exclusion Zone 'fourth state' water, which is water that is specially structured into a quasi-crystalline format. This gives it unique properties—changing the water's charge, making it able to store light energy, and allowing it to propagate electrical charge or information more efficiently through its structure. This hexagonal water matrix exists abundantly in the fascia and central cerebrospinal axis. It often sits nearby cell membranes and mitochondria, along blood vessel and capillary walls, in the body's connective tissue, and in the fluid along our spine and brain.

With these kinds of effects on the human body, could this Resonance—especially if directional—make the human body a standing-wave antenna? Even with the macro-geometry of the human body, could our physical form and its distributions of EZ (Exclusion Zone) water and other electromagnetic-conducive media help to optimise coherence with the Schumann resonance?

When DNA is vibrated at certain frequencies or is metabolically active, it has the ability to emit photons in the infrared range—the bandwidth that can be absorbed and stored in EZ water. 'EZ', Exclusion Zone, water is described as quasi-crystalline—water molecules maintained in a specific structure. Due to its tight structure and negative charge, it keeps impurities out and may even have implications for carrying crystal-like resonant properties.

This semi-ordered water matrix only holds its form under specific energetic conditions, and with chaotic or poorly coherent electromagnetic signals it can revert back to loose water. Some studies mention this EZ water having twelve-fold symmetry, which could also invite symbolic or vibrational parallels to the twelve chakras. Hypothetically—and bear with me here—if each chakra represents a centre of a specific harmonic, we could speculate that the body's physical shape and protein production are products of a complex cymatic interference pattern dictated by our DNA's epigenetic expression. What's more, this epigenetic expression could be compromising significantly with its external environment.

This is where the theory overlaps with my theory on Zodiac physics. Yes, that's right—***Astrology***. If large celestial bodies are influencing our Earth-ionospheric cavities with not just their gravitational pull, but their own intersecting vibrational matrices. Planets and stars and moons alike—each may have a unique Schumann-like influence that extends beyond its more obvious gravitational effects. When time and place of birth allegedly correspond with personality—likely meaning brain structure and function—then the interference of inherited gene expression with resonant environment could help to 'set' the epigenetic expression of a young child (with the help of the chemical DMT at the moment of birth, speculatively) according to the relative locations of unique celestial bodies in our solar system.

Birth marks a phenomenal moment for both mother and child. If both are producing DMT, then this correlation signals to me that this molecule could be implicated in 'setting' the genetic expression or 'imprinting' on it the atmospheric character of the time and place of birth.

Following Terence McKenna's theory on psilocybin, it could be possible under certain conditions that this serotonergic molecule, DMT (chemically very similar to psilocybin), is a prospect for intercalation—that is, it could be able to enter the nucleus of the cell and make modifications to our gene

expression. We will explore this theory in greater detail later on, but it's been my speculation that, regardless of mechanism, this chemical produced in critical moments can put our epigenetics into free-spin, permitting rapid resets and recalibrations that can affect our personalities and developments.

While most speculations on this enigmatic psychedelic molecule are around its implications for death, the afterlife, extraphysical dimensions, and even now having applications for keeping stroke victims' neurons alive in moments of asphyxiation, I believe it may have another use in the body.

Given its molecular properties and possible ability to slip into the DNA molecule for what is assumed to have implications for epigenetic changes, these characteristics led me initially to believe it could act as a powerful chemical facilitator for fine-tuning our genetic expression. If this happens during the moment of birth, it means that it is this exact moment when we calibrate to the local vibrational field in which we are immersed. In researching for this essay, it seems less likely to me that intercalation is the mechanism, although I have become even more confident in the fundamental hypothesis of this.

The basic idea here is that DMT (N,N-dimethyltryptamine), produced in significant quantities during intense and important moments, allows us to set or reset our DNA with an expression that subtly but powerfully 'tunes' us according to the exact time and place of birth. Curiously, when the baby begins to crown, mothers report entering a deep, trance-like psychedelic state characterised by theta brainwaves. After a more stress-induced beta state earlier in labour, as labour deepens, brainwaves slow and begin to read close to what is seen in the brain during REM sleep. Could it be possible that the mechanisms that might be synchronising us with the Schumann resonance during sleep are also activated for both mother and baby during these final moments of birth? If so, this adds to the evidence that we are being genetically and informationally programmed by our environment's resonant character while DMT chemically opens our DNA up to its influence?

While we will explore more on this theory in the 'A Splash of DMT' section, I believed the basic idea behind this could lend itself to earlier conversations. If alignment or entrainment with the resonant or magnetic fields happens on a cellular level—especially by merit of some kind of gradient—then the human body interfacing with a resonant atmospheric

matrix could be somewhat personalised, as explored in the section on Feng Shui.

But before we get too distracted with fringe theories, let's keep the spotlight on this interaction between vibrating DNA and EZ water. If the DNA resonates coherently with the Schuman resonance, it may be more likely to produce infrared photons that can charge both the EZ water and mitochondria with light energy. This could mean that the human body—especially in certain states—could be a free-energy antenna, harvesting low-level atmospheric energy through alignment with environmental resonance. In extension, directional alignment for sleep as well as specific brainwaves and/or heart rates could be more conducive for literally recharging our cells.

Cytochrome c oxidase, an enzyme in mitochondria, absorbs near-IR light and uses it to enhance ATP production, possibly by improving electron transport and reducing oxidative stress. This is the basis of photobiomodulation—where red/IR light therapy enhances mitochondrial function and cellular healing.

When the body is in a healthy state, the photonic emissions from properly vibrating DNA may be more coherent (laser-like), while in states of sickness the body may be less orderly and therefore less efficient. This perspective could help us to understand that health and sickness, generalised, are relative states of cellular synchronicity, which has also been found to be true for emotional state. This cellular order or disorder may be characterised by mechanical vibration, but have overlap with quantum coherence within the body. Any disruptions to the body's functions, such as physical trauma, toxins, or deconstructive/aggressive EMF radiation could collapse structures or force them out of vibrational alignment. The body would then lose rhythmic harmony both with itself and its environment, greatly losing energy efficiency and function.

We could even speculate that mucus in the body—from what we refer to as sickness—could in part be water lost to compromised structure and coherence. EZ water is gel-like and forms along hydrophilic structures—that is, water-loving living surfaces. Excluding contaminants by virtue of its structure, it maintains a negative electric charge and can support not just function and order, but protection from toxins and free radicals. If this coherent structure gets compromised, contaminants may find their entry, and the water is rendered useless except as a flushing medium.

Even in the foggy few minutes of waking up, our brain and body rapidly shift in mode of function. Could this realignment temporarily disrupt EZ structure, resulting in a floppiness and blurriness to do with loss of cellular function and coherence?

Solar Sleep Architecture

Did you know your sleep early in the night is different to early morning?

Sleep is structured into different stages, cycling approximately every 90 minutes through non-REM (NREM) and REM sleep. However, the *distribution* of these stages **changes over the course of the night**, with the period before and after midnight differing significantly in terms of sleep quality and function.

The first half of the night is dominated by deep, **slow-wave sleep** (SWS), which is most restorative for the body and brain. Higher growth hormone release occurs, aiding muscle repair, immune function, and memory consolidation. Disturbances during this phase can cause grogginess. As the night progresses, deep sleep decreases and time dedicated to **REM sleep increases**. REM sleep peaks in the early morning, crucial for emotional processing, creativity, and learning. It's considered the reason why we often wake in the morning from the midst of vivid dreams.

Now, why is this? Why the change in sleep architecture?

Given our proneness and sometimes *necessity* to wake up at odd and unanticipated hours—for emergencies, or even for retrofitting our sleep hours into our awkward (custom) human existence—90-minute blocks seems a reasonable evolutionary adaptation. Yet it seems 90 minutes isn't just 90 minutes. If the body knows when it has gone to sleep but not when it will wake up, it may just be prioritising certain functions and maintenance routines.

The distribution of sleep stages (sleep architecture) is influenced by both bedtime and biological rhythms, but there is a general shift in sleep architecture after midnight that occurs regardless of when you go to bed.

Even if you sleep from 4am to 12pm, your first few cycles will still favour deep sleep, and REM will increase later in the morning. But although sleep

cycles are self-contained, there is still a biological shift around midnight, especially for naturally timed sleep (aligned with circadian rhythms).

Temperature drops, which is purposeful for our biological mechanisms, and there is a **rise in cortisol between 2 and 4am** that is independent of sleep routine. This is considered a mechanism implicated in inexplicable wake-ups, although given a new perspective on atmospheric influences, we could speculate whether the solar surge from a rising sun begins to register in our biology during this time.

But what is the real cause of this cortisol spike? Is it just our body clock doing its thing, or is there an external trigger?

There seems to be a magic window of time between 10pm and 4am where, if you engage in activity that disrupts your circadian rhythms (e.g. looking at blue light), it plays havoc on your system. Given our circadian rhythms are not a clock set in motion from birth, and will adapt if we change our time zone (e.g. we go to live overseas), it appears the planet's daily cycles will stay vitally important to our long-term health. It is assumed that this is our body's response (and that of our suprachiasmic nucleus) to sunlight cues alone. But what if the body's clockwork is sensitive to other stimuli?

Temperature in the dark of night is lower, and cold can trigger the body into a cortisol response. Yet curiously, in the Indian study mentioned prior, it is said that alignment with the east produced less of a cortisol spike compared with the north (in the Northern Hemisphere), which could begin to show **an association between cortisol and external influences** if there is an effect from registering atmospheric changes.

As we've established, there is a correspondence between REM sleep, theta brainwaves, and the Schumann resonance. Sleep stages N1 and N2 also share in these theta waves, which are short early in the night but lengthen with REM sleep later in the night. Before this cortisol spike kicks in, stages 3 and 4 (slow-wave and REM) dominate these first two to three sleep cycles. This might continue to corroborate a synchronisation between the brain and effects from the surging atmospheric tide that brings greater Schumann acoustics.

The specifics of this could be just out of reach without further research, although given the nature of standing waves, it could be likely that having one's head closer to the source is more correlation than causation in terms

of observable benefit. This idea of an acoustic gradient, however, interests me, and I would like to explore more.

We could fathom for fun the componentry of influence on the human body. With the possible exceptions of gravity and the Coriolis effect, it's unlikely mechanical forces would have any significant impact on our sleep. Yet given brain waves are reflective of cellular oscillation, manifesting as synchronised electrical activity of neurons, we could speculate on whether the electrical or acoustic effects of the Schumann resonance (SR) and ionosphere could indirectly impact the mechanical movement of cells through helping to conduct electrical activity in the brain. If there is a functional correspondence between the SR and theta activity, we might question what specifically it's doing.

Feng Shui's Kua Numbers: Personalised Entrainment and Biological Variation

Feng Shui as an ancient philosophy tied with Chinese Astrology has quite a bit up its sleeve. Along with its suggestions for the layout of one's home and generally recommended sleep direction of *south* or *east*, it also has a deeper, more complicated, and more personal take on which way you should point your head at night.

This is to do with your own personal "kua" or "gua" number. Based on your birth year and sex, by Chinese philosophy you are categorised as an energetic type by a number between 1 and 9. With the number 5 as a kind of inert axis for the other numbers, the other eight numbers represent the "Eight Mansions" (Ba Zhai), whose numbers, when visualised graphically, are placed around the central '5' in a 3x3 magic square (each row/line of three adding up to 15). Each of these eight outside boxes correlate with the eight directions—north, south, east, west, and also northeast, southeast, northwest, and southwest.

According to one's kua number, each person is said to have four auspicious directions—bringing luck, health, prosperity, and harmony—and four inauspicious directions—bringing obstacles, conflict, illness, or misfortune. The eight types can be reduced to two main groups: East and West. The East Group—numbers 1, 3, 4, and 9—is 'lucky' in the directions north, east, south, and southeast, while the West Group—numbers 2, 6, 7, and 8—are

‘lucky’ in the inverse directions. If this can be considered as a serious model, this might effectively say that there are more ‘orthodox’ sleepers and ‘unorthodox’ sleepers. But is there anything real to this?

Almost dismissing it as woo-woo (gender and birth year seemed a bit vague to me), I ultimately decided to include the kua/gua numbers because I felt that there was enough here for it to be taken seriously to some degree.

First and foremost in my consideration, I cross-referenced my own kua number with my personality type, which read as astonishingly accurate. The type description spoke of my strengths, my weaknesses, my desires and habits, my tendencies in self-reflection, my social needs and habits, and even my medical history. Everything was spot on.

Not wanting to be sucked in by confirmation bias, I checked the other types, although none were even close to describing how I perceived myself, and they were all quite different—not some generic, universal drivel that could apply to anyone.

Given the eerie accuracy, this felt like a strong start. However, for it to hold any water and have some link to scientific verifiability, there needed to be a causal element, which in my view could only be explained logically through the effects of atmospheric resonance on genetic expression.

While there are a number of variations of astrology and birth-related personality types, I wondered if these 8–9 year cycles corresponded with the cycles of the planet or Sun. If it did, I thought there might be some plausibility with observations of patterned effects on the Schumann resonance or Earth-ionosphere cavity. And lo and behold, yes—there appear to be solar subharmonics, sometimes represented visibly in the solar and geomagnetic data across patterned periods of eight to nine years. These appear to be cycles with the potential to modulate solar radiation, wind, and Earth’s ionosphere, plausibly linking with my theory of epigenetic frequential imprinting.

While the eleven-year Schwabe cycle tends to take the spotlight as solar magnetic activity wanes and waxes in more obvious ways, data analysis (particularly through Fourier and wavelet spectra) shows that solar activity also has modulations at other timescales—from cycles of just 5–6 years up to cycles of several hundred or thousand years. With patterned half cycles and subharmonics for planetary, solar, and galactic cycles of different types and timescales, this might give room for a number of

ancient charts and models to be considered as simultaneously credible from a scientific perspective.

We also see numerology cycles, including a nine-year cycle, existing in Pythagorean philosophy and ancient cosmological systems. Many of them speak of a characterisation pattern, where each year within the broader cycle carries a different meaning, influence, or developmental stage. If we are indeed affected by the vibrational influence in a way that defies the monodimensional perspective of bringing either constructive or destructive interference patterns, we might consider that the more 'spiritual' coded interpretation of our universe has more ground than we might have initially thought.

Now, I couldn't hope to explain in full—even speculatively—how biological differences could reverse the correspondence of a person to the electromagnetic fields we're discussing in this essay. Neurological entrainment and neuronal alignment with the Schumann resonance already seem complex enough to me, and I'm willing to be the first person to put my hand up and say "I don't know". However, from all my research and observations on the human form, plus what I've heard from models like Aryuveda and modern medicine, it seems a fact to me that humans can hardly ever be grouped into a one-size-fits-all theorem. On top of all our psychological models like Myers-Briggs, the Enneagram, the Mayan Matrix, Human Design, and the various Astrology models, we also know that different people have different blood types, different chronotypes, and a hugely complex number of variations and intersections between everything mentioned above *and more*. So could there be people who don't abide by the alignment principles I've explored with you in this essay? Quite possibly. Can I explain it? No, not currently.

The Chinese explain this as a personal order of Qi—energy or information flow—interacting directionally in space and time. Their own traditions supposedly derived from observed correlations between circadian clues (solar path and light intensity), prevailing winds and monsoon patterns, magnetic compass orientation, and agricultural rhythms. With beliefs are based in real-world observations, this already gives some sort of solid grounding to something we might initially perceive as mystical nonsense. And given Chinese history goes back as a continuous cultural lineage to around 7000 BCE (writing and codified metaphysics closer to 1600 BCE), we might consider that one of the oldest and greatest pioneering civilisations had plenty of time to observe some unusual patterns that

might have so far escaped the few hundred years of peer-reviewed academia.

If I were to take a stab in the dark from a more Western perspective, I might largely surrender to ignorance, though I'd expect that we still have some gaps to fill in our collective understanding of physics, more energies and influences to discover, and greater respect for the complexity of the human form to attain. For example, there could very well be correlations between blood types and astrology charts, between ayurvedic types and cosmic cycles. There could be influences and energetic 'substances' beyond our current perception. In this case, we might need to think in terms of correlations rather than causations, given the latter in this case may not yet be within our reach of understanding. But, perhaps, your birth year and sex might just have a causative influence on how your neurons polarise or are affected by electromagnetic fields. I'm sure we will find out in time…

Directional Flow of Brainwaves

In contemplating a correspondence between brainwaves and cardinal directions, I considered the origins and propagation direction of the waves within the human brain itself. Now this isn't as linear as you might think, with signals jumping back and forth, using feedback loops and going in multiple directions at once. However, there are regions of the brain that are more involved with certain types (bandwidths) of wave frequency, as well as neurons that are positioned and ready to fire at specific angles.

For example, **theta waves** generated in the hippocampus can travel toward the frontal regions during memory recall; **alpha waves** have been observed to move from the back (occipital lobe) toward the front (frontal cortex); while **beta and gamma waves** can synchronise activity across different brain regions, although they don't necessarily move in a single physical direction.

While this is only a rudimentary theory, if there is an effect from directional alignment of the actual cranium—which is different to but not necessarily exclusive from the direction of the overall body—it could carry the implication that our **sleep position** also plays a role in alignment with planetary energies. The current body of literature does not have complete unanimity over which side is best to lie on when sleeping, and it's possible that geographic location (which hemisphere the study took place in) could

also be impacting results. For example, someone in the Southern Hemisphere pointing the top of their head north while their nose points east could possibly have subtle differences in sleep quality *at that particular moment* (we often change position in the night) to the next moment when they roll over to face the other side.

Our speculations could take us to evolutionary biology, where there is a complex and nuanced interaction between facial direction and cardinal direction. While planetary energies could mean there is an optimal direction or position for sleep, we could have evolved to be able to alchemise these energies in different ways. Unfortunately, we are likely still a long way off understanding the full range of function of the human brain both in and out of sleep. Even the process of measuring brain activity during sleep comes with the risk and even likelihood that we will impact it in some subtle way.

This idea opens up another can of worms, possibly bringing a whole new range of questions and variables to the conversation. Face-up, face-down, to the left, or to the right… Having studied the basics of sleep position, the benefits and drawbacks of each tend to be considered in terms of how they each affect breathing, posture, circulation, lymphatic drainage, digestion, and heart strain. But apart from where we point the crowns of our heads, I ask without knowing the answer: is there any significant effect from where we point our nose?

Unlike animals known for migratory magnetoreception, like birds and turtles, humans don't have any known neuroanatomical structures explicitly designed to orient to the cardinal directions. However, the spatial geometry of the brain's electrical organisation is highly directional. Signals tend to flow anteroposteriorly (between front and back) and lateromedially (between the sides and midline). When you tilt or angle your head, several systems subtly shift, such as the inner ear (vestibular system) and visual frame (when awake). Cerebral blood flow can also shift and redistribute according to gravitational alignment and head orientation, subtly changing the brain's functions, biases, and interpretations.

Qigong theory speaks of a back-to-front direction of energy that may correspond with the propagation of alpha waves. If this extends to full-body circulation of energy, ions, or electromagnetic waves around our toroidal field, we may be potentially looking at a complicated matrix of interaction. I wonder: if brainwaves propagate directionally and so do Schumann waves, could interference patterns, conflicts, or alignments take

place locally in the human brain or across/outside the human body, affecting specific physiological functions?

Brainwaves are often hemispherically dominant (e.g. one side of the brain may show stronger coherence than the other) and can propagate directionally along neural pathways or in standing wave patterns across cortical structures. If Schumann waves *reinforce* natural brainwave activity, this could enhance states like meditation, relaxation, or creativity (e.g. Alpha-Theta entrainment). If environmental EM waves (e.g. man-made EMFs, solar activity, Schumann disturbances) interfere *destructively* with brainwaves, however, this might lead to mental fog, sleep disturbances, or mood shifts. Some research suggests geomagnetic storms affect melatonin production, possibly linking Schumann shifts to sleep/cognitive cycles. There's even some belief among bioelectromagnetic researchers that coherence between external and internal oscillations could regulate homeostasis.

There are natural Earth-scale ELF frequencies (Schumann resonances) that sit in the same frequency band as some brain and body rhythms, but the fields are considered extremely weak and the evidence that they meaningfully "drive" cells or brains is limited and controversial. Yet the simple fact stands—environmental frequencies can align with brain rhythms, so entrainment is plausible in principle. But while scientists remain sceptical with the weakness of causative effects, could we not consider correlative ones?

Among neurons, the ion channels open as a wave—like a Mexican wave at a stadium. If there is aligned directionality in this between the brain and the greater globe, phase-locking could occur in principle—like an antenna tuning in. Inside the body, this coupling is likely to be weak, but the invisible toroidal field that extends far beyond the physical limits of the body—especially from the heart and brain—should be able to couple much more easily.

An external oscillatory field that shares frequency/phase with an internal rhythm can phase-lock or entrain that rhythm, so the external field and the body's torus can become temporarily synchronised. Because the body is a conductive volume (where tissues act like a salty conductive electrolyte solution), the external field induces tiny currents/voltages inside tissues. Those induced signals preferentially appear where geometry and conductivity focus them (near membranes, nerves, vessels).

Normally, neurons communicate via synapses—chemical or electrical. But they're also surrounded by extracellular space filled with ions. When many neurons fire together, they generate local electric fields in that space. Those extracellular fields can influence nearby neurons, altering how easily they fire—without synaptic contact. That's ephaptic coupling: "field-to-field" interaction between neurons through shared extracellular voltage changes.

In studies, high-intensity man-made EMFs have been found to affect the firing of neurons inside the human head. Simply put, if the amplitude of the EMF is bigger than the neuron's firing threshold, it triggers an electrical jump that can carry a signal. If an external electromagnetic field is strong or precisely tuned enough, it can change the electrical voltage across the neuron's membrane.

It is thought that natural EMFs like the Schumann resonance and the Earth's geomagnetic field are several orders too weak to affect the brain in the same way. The frequency, timing, and spatial orientation of the EMF all determine whether neurons actually depolarise or remain unaffected, as it requires a ~10–20 mV shift. But what if the human brain's electrical activity can change and harmonise to increase the chances of similar activity?

This does not necessarily mean that the natural EMFs would have to force the neurons to fire, but even a signal that can register in the sensitive neural instrumentation could have a bias or even an inclination to be met by the brain's own activity. After all, small external fields that alone are subthreshold can still affect the neuron's firing if they arrive at a sensitive phase of its ongoing activity. Spike timing matters. This is why weak fields can sometimes have measurable network effects.[11]

"Man's perceptions are not bounded by organs of perception; he perceives far more than sense (tho' ever so acute) can discover."
—William Blake

When an EMF passes through the body, its "spacial orientation" can modulate biological effects—specifically electrical signalling. When an external electric field passes through conductive tissue, it pushes on the free ions in the extracellular fluid. Positive ions drift a tiny bit one way, negative ions the other. If an EM field is *aligned* with the axis of a neuron, this creates a voltage imbalance between its two ends. Meanwhile, a field *perpendicular* to the neuron generates almost no effect. That's why, in transcranial magnetic stimulation (TMS), technicians rotate the coil—the

direction of the induced current changing how strongly the neurons respond.

As the distribution of the Earth-ionosphere cavity moves and changes, relative to the individual and influenced by the positions of the Sun and Moon, the resonant epicentre of the Schumann resonance could shift a person's alignment over the course of a 24-hour cycle. This would be most noticeable during sleep when we are relatively static, especially if theta is primarily how we're coupling.

The implications of this are that the bulge will be westward in the evening and eastward in the morning, although the relative angle for the sleeper may have some additional importance. If the size of the atmospheric bulge plays a part in this entrainment, then a bulge on the opposite of the world may be effectively impotent in its effects on the firing of neurons. So too may a diminishing bulge as it disappears over the horizon.

The question is, would it be good or bad, supportive or disruptive, for sleep if the brain's neurons are firing when in alignment with the source?

My primary hypothesis has been that the signals from lightning-produced Schumann frequencies are inherently sleep-supportive as we point ourselves toward the source. However, sleep is often characterised by a *reduction* in neural activity, not an increase. Of course, the brain itself has a significant say in how it's firing, and this coupling achieved by activating the theta brainwave may only apply to the REM stage and possibly N1 and N2, which happens more in the early hours of morning.

If we point ourselves westward, going to bed before midnight, our sleep onset process may be more difficult because of the neural alignment with the disappearing Sun and the atmospheric bulge that follows it. If we point ourselves east, however, we may find that the opposite happens—where neurons pointing away from the source have a *lesser* chance of firing, which may help the brain to slow down and relax—at least initially.

Given the early stages of the night are geared more towards slow-wave sleep, the brain's processes seem to benefit from slowing down as much as possible as it enters the delta state. In contrast, the early hours of morning correlate more with REM dominance, where neural activity is much more energetic as we dream and process. This phasing of west-to-east relative positioning of Sun and Cavity align well with what should be expected of

our neural activity, and what may be expected of dysfunction if we were aligned to the contrary.

"Despite mounting phenomenological evidence that small fields can entrain network activity and have an effect on brain function, to date, there is no experimentally verified mechanistic theory on how this causal interaction may occur." —Radman et al., 2007.

In the pathing of neurological transmissions, we often think of the brain's signalling like a row of dominoes, where the next neuron in a chain is reactive to the previous, and by that mechanism the whole brain works. But the reality is far richer, where a 'thought' is the product of a vast network of feedback and modulation signalling, neurons firing in multiple directions, in parallel networks, in a multidimensional cascade. In this way, thoughts in our brain are like ripples in a pond, the computer-like signalling much like the back-end processing of invisible electric fields. For when we envision something as a thought or a memory, we are able to see complex images in our minds and work with many dimensions of thought simultaneously.

My own proposition to explain the holistic operations of the brain (at least in part) is that resonant triggers can be found everywhere in one's life—sounds, sights, concepts, reminders. Everything appears to be related in some way to frequency and frequential structure, by which our brain is also organised. While my own working hypothesis in my book *Quantum Human* takes much focus on neurotransmitters, localised neuronal structures, and their individual responses to like-vibrations, the most sensitive central instrumentation in our brain is thought by some to be our pineal gland—our radio antenna. While this organ still sits in enigma, I've wondered if it plays a part in communicating globally to our brain—perhaps similar to a frequency amplifier or transducer, where a signal that already exists around us is repeated and reinforced (often with an element of consciousness) so that specific, relevant pathways in the brain are activated. After all, a conscious effort to remember or think about something keeps our attention in place while our brain's signalling works to decode, recall, extrapolate, and 'fill in the gaps'.

In physics, 'resonance' occurs when a system is made to vibrate more powerfully when it is affected by an external frequency that is identical or nearly identical to its own natural frequency. If this is happening at the cellular or even subcellular level, we may consider a new layer of

perspective when looking at intra- and inter-body communications. Indeed, which influences are helping to conduct the orchestra that is our neural circuitry?

Therefore, the correspondence between our brain and natural EMFs may not necessarily be a direct effect of the fields on the neurons, but part of a subconscious or semiconscious tuning—a frequency imitation of sorts that allows us to enter into and decode a signal transmission within a larger field of information. There could even be mechanisms at play we are still far from understanding; in fact, I would bet on it.

If information already exists "in the aether" (which seems to be quite literal), could it be possible that the brain—possibly through some kind of conscious control of the pineal—is able to navigate the informational field, conducting and entraining (channelling) the rest of our neural machinery? There are both conscious and subconscious applications for this.

But what is the pineal exactly? Is this antenna analogy even vaguely true? How might it work, if so?

Enigmas of the Pineal

The pineal gland, as per its name, is shaped like a pinecone. Usually between 5 and 9mm in length, this unique gland—repeatedly appearing in cultural and spiritual contexts worldwide throughout history—appears to have mystical properties and abilities. While every other component of the brain is hemispheric (having two iterations, mirrored on either side of the brain) and protected by the blood-brain barrier (BBB), the pineal sits as a singular organ in the cerebral centreline, fully exposed to the BBB, and made of different tissue to the rest of the brain. It contains biogenic, piezoelectric microcrystals of calcite and apatite, as well as paramagnetic molecules, which are molecules that are weakly attracted to magnetic fields.

If we pursue the idea that the body could be made up of a series of antennae, the pineal gland would most resemble a discone antenna. This design of antenna is praised for its exceptionally wideband functionality, capturing or broadcasting frequencies at a ratio of approximately up to 10:1. Considered omnidirectional, its greatest sensitivity is toward the distant earthly horizon, rather than for close-by signals.

To make some quick comparisons, a traditional discone antenna is designed with a 25–40 degree apex angle, where the pineal is slightly fatter, at 40–60 degrees. The narrower design angle of a discone gives it greater range and makes it more directional, while a wider cone—such as the design of the pineal—might reduce its physical range as an antenna, but increases its breadth of frequency response.

The design of a discone antenna also has a disc at the top (hence the name), an electrical feedline, and an insulator between the cone and the disc. While the apex of the antenna points to a disc, the pineal points almost in the same exact orientation to the quadrigeminal (tectal) plate—a broad, thin, oval plate with slight curvature, around 15–20mm in diameter. A large disc adds to the biases of a fatter cone, adding to its omnidirectionality but potentially reducing its directional range.

In terms of feedline analogies, the pineal is connected to the rest of the brain by the slender 'pineal stalk', and there also appears to be a kind of insulator layer between the pineal and tectal plate—a thin arachnoid and pia mater membrane, with cerebrospinal fluid (CSF) in between. The arachnoid and pia together are called the *leptomeninges*—poorly conductive membranes sandwiching some highly conductive CSF. Due to their low ionic content and fibrous, non-neural composition, these membranes act like a biological dielectric layer, partially insulating the pineal from the plate for functional purposes very similar to a discone antenna.

Every antenna also has an input impedance. This is a measure of how easily energy flows between systems, how much the antenna has to resist or reshape the flow of a signal—working to shift an imperfectly matched rhythm to couple with it and transduce its signal. When impedance between signal and antenna is coherently matched, energy flows freely—like a singer hitting a note that makes a wine glass vibrate perfectly. When it's mismatched, energy reflects or scatters—like shouting into a pillow—reducing energetic or phase coherence. In this case, a fatter cone and wider disc means flatter impedance—easier coupling across a range of unpredictable frequencies.

For neurons and pinealocytes, individually, they don't generate large external fields or radiate power like an antenna transmitter would. However, they are highly sensitive, high-impedance structures that respond to tiny voltage and field changes. That is, they are more likely to detect and resonate with signals rather than project them. That high impedance could make sense: neurons are like fine-tuned resonant cavities,

not power transmitters—more like crystal receivers than loudspeakers. If our primary goal is to benefit from the reception of Schumann signals (or others), rather than to be broadcasting during our sleep time, it would make sense that we simply tune—and possibly angle—ourselves to receive while in a quiet, low-energy state.

The actual angling of the pineal inside the head has the apex pointed around 30–45 degrees backwards and down, towards the start of the spine. Curiously, the optimal sleep position, known as the 'zero gravity' position and used by NASA astronauts, has a person lying on their back with their head elevated. Can you guess at which angle? 30–45 degrees, of course. This sleep angle, done in supine (lying on the back), would theoretically align the pineal gland with the horizon. Perhaps I'm grabbing at straws here, but it's almost like the brain is built to compensate for a pillowed sleep angle. Running out of coincidences, we might also notice that foetuses in late development in the mother's womb also tend to maintain a loose 30–45 degree angle to the spine. In the third trimester, a baby tends to move around less, keeping them loosely in this angle range whether the mother is upright or horizontal. Of course, this could be entirely incidental, although the parallels are beginning to stack up.

One thing to consider is that we don't always sleep face-up. If upright discone antennae transmit horizontally, a horizontal pineal, by the same principles, should transmit vertically. This could have implications for connecting with different Schumann harmonics in the atmosphere—or even beyond…

A supine position, angled just right, might shoot our signal vertically if our pineal is pointing out the backs of our heads. If we're side-sleeping, the pineal would also be pointed horizontally with its wider broadcast still going vertically. However, the structure of this suspected bio-antenna, as mentioned, appears to favour omnidirectionality over distance.

Of course, engineers with in-depth knowledge of antennae might question the physics of such a supremely small antenna deep inside a ball of bone and meat (the skull). Its electrical impedance, range, and power would make it a poor contender for classic antennal use. But this ain't no average antenna we're talking about here, and we're quite aware that the brain doesn't receive or transmit signals in the same way a TV antenna might. For any rightful sceptics on this matter, I hope you will reserve some open-mindedness for the possibilities, not the 'answers' I've brought in loose bundles to the table.

The Power of the Pyramid

A fascinating potential addition to this theory is the recognition that pyramid-shaped neurons in the hippocampus and cortex physically point upward toward the top of the head. Out of the neocortex's approximate 16 billion neurons, about 70 to 80 percent of them are pyramidal. The hippocampus adds around 20 to 40 million more to the count, forming the bulk of the brain's excitatory machinery.

This pyramid shape we see in the neurons is purposeful, functional, and is aligned directionally with the top of the head—their apexes/apices physically pointing upward. For these neurons, the electrical input comes from above and can travel sideways or diagonally downward. While the electrical signals don't cascade strictly in a head-to-toe direction, they create a tiny dipole field that is directional. This means we may have tiny micro-dipole fields produced by our neurons as well as larger macro-dipole fields produced by the body as a whole.

Now as we covered earlier, neurons, when aligned with electromagnetic fields, are more inclined to fire. Both chains of straight neurons and pyramidal neurons are directionally angled to the top of the head with significant variance. While the neurons themselves are set fairly rigidly, it might appear that this open angling permits a looser or more flexible angle for coupling with external EMFs.

Pyramidal neurons are the cerebral cortex's main excitatory cells. They're arranged in columns, with their apical (top) dendrites pointing perpendicular to the cortical surface (toward the outer surface). This means that if an external electric field runs perpendicular to the cortex, it aligns with thousands of neurons at once.

Pyramidal neurons have a long main branch (the apical dendrite) and a tall, pyramid-like shape. Because of that shape, when an electric field passes through the brain, these cells pick up more of the field's effect—their membranes become more electrically polarised. Other, smaller neurons (like interneurons) don't feel the field as strongly because their shape and branching spread the current out more evenly. Radman et al. tested this and found that different types and layers of neurons need different field strengths before they start reacting. Pyramidal neurons respond at lower levels.[12]

On the top of the head (vertex), the neurons point vertically, while on the sides of the head the neurons point horizontally outward toward the ear or slightly upward. However, within the folds of the brain, there is plenty of space for neurons to face different angles. If this range of angle for stacked neurons has a strong bias to the tops of our heads yet still allows loose angles of alignment (like a radar dish), then this might make a case for sleep direction largely being defined by which way our head is angled. Given almost nobody is a perfectly straight sleeper, side-sleeping with the knees and feet ever-inconsistent in angle, it may simply be the head and possibly the heart that matter.

The Schumann waves propagated by lightning strikes are horizontally omnidirectional. This means that, if these waves in some way affect the human system directionally, sleeping due north may only be a beneficial average sleep angle, given that, technically, lightning strikes can happen anywhere. If the majority of them at any one time are happening on average in the direction of the equator—more than beside or behind (if the equator is 'frontways')—then the majority of pulses are running more or less down from our heads to our feet.

Broadly speaking, neurons down the spinal column are far more aligned and organised directionally than in the brain. In the spinal cord, neurons are organised in longitudinal tracts (bundles) that run up and down the column. Especially in the white matter, neurons are highly aligned—essentially a set of parallel communication highways between brain and body. If these are in alignment with an electromagnetic field passing through the body, one might consider that sleep direction could have implications for the body as a whole.

As measured by ECG, the heart's electric field is about 60 times greater in amplitude than brain waves measured by EEG, with a magnetism around 5000 times stronger (measured by a SQUID—Super-conducting Quantum Interference Device). The rhythmic activity of the heart generates electromagnetic, sound pressure, and blood pressure waves that propagate throughout the body, allowing every cell to sense and "feel" these fluctuations, and reinforcing the heart's function as a global cellular synchroniser.[13]

With each heartbeat, the heart sends a powerful wave of pressure surging through the arteries, traveling far faster than the blood itself and creating the pulse we can feel. This wave drives blood through the capillaries,

supplying cells with oxygen and nutrients, while stretching the arterial walls and generating measurable electrical activity. The rhythmic compression on cells can even trigger certain proteins to produce tiny electrical currents in response. Remarkably, the arrival of this pressure wave in the brain—about 240 milliseconds after the heart contracts—is associated with detectable changes in neural electrical activity, highlighting the heart's role in coordinating signals throughout the body.

As explained by Rollin McCraty in his 2003 paper '*The Energetic Heart: Bioelectromagnetic Interactions Within and Between People*':

"The term 'coherence' is used in physics to describe the ordered or constructive distribution of power within a waveform. The more stable the frequency and shape of the waveform, the higher the coherence … Coherence also describes two or more waves that are either phase- or frequency-locked. In physiology, coherence is used to describe a functional mode in which two or more of the body's oscillatory systems, such as respiration and heart rhythms, be-come entrained and oscillate at the same frequency. The term cross-coherence is used to specify this type of coherence. All the above definitions apply to the study of both emotional physiology and bioelectromagnetism."

McCraty goes on to explain how emotions are the heart and the brain acting in concert—how the heart is, in part, a sensory organ and plays a particularly important role in emotional experience. Positive emotions—such as appreciation, love, or compassion—equate to greater coherence and order within the body. Negative emotions, in contrast—such as anger, frustration, or anxiety—mean less synchronisation of heart and nervous rhythms, being more erratic and disordered.

This *order vs chaos* dynamic of emotions refers to the coherence both within independent systems like the heart (autocoherence) and between systems (cross-coherence/entrainment).

"Typically, entrainment is observed between heart rhythms, respiratory rhythms, and blood pressure oscillations; however, other biological oscillators, including very low frequency brain rhythms, craniosacral rhythms, electrical potentials measured across the skin, and, most likely, rhythms in the digestive system, can also become entrained.

…

Coherence confers a number of benefits to the system in terms of both physiological and psycho-logical functioning. At the physiological level, there is increased efficiency in fluid exchange, filtration, and absorption between the capillaries and tissues; increased ability of the cardiovascular system to adapt to circulatory demands; and increased temporal synchronization of cells throughout the body. This results in increased system-wide energy efficiency and conservation of metabolic energy. These observations support the link between positive emotions and increased physiological efficiency that may partially explain the growing number of documented correlations between positive emotions, improved health, and increased longevity … Increased physiological coherence is similarly associated with psychological benefits, including improvements in cognitive performance and mental clarity as well as increased emotional stability and well-being ." (McGraty, 2003)

What's more, this connection between the brain and heart is sure to shape perception. Especially if order and disorder characterise the functions of our systems, the mind must reap some of the effect. From studies done on rats, we observe emotions like fear to cause immediate and significant deficits in cognitive function. This could possibly explain the cultural belief that pointing west during sleep can cause nightmares—if we are unable to properly align and synchronise with the Earth's electromagnetic field.

The hippocampus is one of the primary brain regions pumping out theta signals during REM sleep—clearer during REM than those produced during N1 and N2. We can see now that the machinery behind the theta signals have a directional component, which theoretically have the capacity to couple with a larger global signal.

The Piezoelectrical Miracle

In reaching an age of contemplation, I began to find mystery in the workings of the human body. The process of putting whatever we consider 'food' into our mouths and somehow converting that into energy through the breakdown of its components…for me became a function to marvel at. As I watched people, myself included, I observed what seemed like endless energy. A

person would move about, lifting things, thinking things, talking, singing, dancing, working… A marvellous machine that could run for a hundred-odd years never fully breaking down or running out of fuel. Has all this daytime energy really come from a sandwich and a bowl of cornflakes?

If we are indeed in the antenna's business of transducing environmental information, then we are also in the business of converting environmental energies. Our physical construct—effectively a salt-ion acid battery—may then double as an environmental energy harvester, with potentially trillions of cellular piezoelectric alternators generating an electric charge in response to applied mechanical stress—literally surfing the vibe of both our inner and outer vibratory worlds. The cochlear hair cells in the ear, for example, receive vibrations from sound waves, converting these environmental waves automatically into electrical signals.

Could it be? Are we self-charging ionic organisms?

Ancient practices like yoga, qigong, and Egyptian ritual postures use the body's geometry to maximise resonance and channel energy. With a person's own physiology, it's been shown that there's power in shape—for healing, wisdom, or strength, connecting with a particular frequency. What becomes possible when we harmonise with energies greater than we can produce on our own?

Effectively, this idea implies that we can be electrically activated or supported by our environment. What we do know is that cells are mechanosensitive, where their ion channels can open up in response to vibration. When this happens, it directly produces electrical signals, which is how touch, hearing, balance, and blood pressure sensing work. Much of the tissue within the body is considered notably piezoelectric, such as bone, collagen, and tendon. This doesn't necessarily mean our cells get electrically recharged like a battery—at least not directly.

Both cells and the mitochondria itself work in part through Brownian motion. This means that the electrical charge, for example—movement of ions from the inside to the outside of a cell—occurs through a rapid succession of collisions: sodium bouncing around inside the cell until the proteins pump them out. This means the cell may have a quicker 'reload' mechanism.

If we consider the impact of cymatics—the patterned distribution of particles from sound—external vibrations, in theory, could affect how ions

cluster or flow, especially near membranes. Substrates could find their binding sites faster, and the system might work with less wasted effort, conserving ATP that would otherwise go into maintaining gradients. Even tiny improvements in mitochondrial efficiency could reduce the ATP cost of "housekeeping", and over trillions of repetitions across trillions of cells, there could be a noticeable physiological payoff. Experientially, this could be felt by an individual as enhanced energy, clarity, stamina, or resilience.

This is conceptually similar to why photobiomodulation (red/infrared light) seems to enhance mitochondrial function. It doesn't change the basic physics, but it can facilitate function.

Inside a cell, there are numerous components that are resonating at their own independent frequencies. Membrane oscillations, cytoskeletal vibrations, organelle dynamics…

When we lie down, gravity could also add some additional mechanical pressure—a piezoelectrical boost. The brain could be described as many things—both an antenna and a crystal—and this subtle gravitational pressure while lying down could provide a tiny piezoelectric nudge to its tuning. Gravity does cause a redistribution of blood, cerebrospinal fluid, and tissue pressure when lying down. This shifts intracranial pressure slightly depending on head orientation (supine, side-sleeping, etc.), and mechanical stress at the cellular level is known to influence ion channels and neuron activity, called mechanotransduction.

It just so happens that modern discoveries and theories on the Great Pyramid of Giza mention an energetic biogeometry where Earth's natural energies and rhythms (including piezoelectrical effects during the full moon / high tide) can effectively be harvested and generate an electrical effect. Maybe it's a stretch, but could a similar principle apply to the physical neuronal geometry within the brain?

When we look more closely at the Pyramid of Giza, it's the bottom layers made of dolomite and quartz-laden granite—also used for the King's Chamber—that carry these piezoelectric properties. Given the Nile rises and subsides, it seems no accident that the pyramid was constructed like this to make use of the river's pressure on the piezoelectrical underside of this magnificent construction. In a monument so painstakingly built like

this, there are no accidents—and the piezoelectrical base appears to be one of its core designs. What could this mean?

Fantastical claims have been made about the phenomenon dubbed 'pyramid power'—amazing effects and benefits from ancient pyramidal structures, and indeed really any pyramid shape, such as health improvements, food preservation, being a powerhouse for thought generation and creativity, working as an energetic aphrodisiac chamber, and even maintaining the sharpness of razor blades.

While Wikipedia will tell you these are unfounded beliefs, studies are now beginning to confirm the magic of the pyramid shape, and has even been of special interest to the Russian military.

It's believed now from research that the pyramid shape can collect and concentrate external electromagnetic waves.[14] As a couple more examples of the effects found from studies done so far on pyramid power, experiments appear to be finding noticeable effects on seeds and water stored inside pyramids before sowing.[15] In rats, neuroendocrine and oxidative stress were counteracted in the study groups kept in wooden pyramid structures aligned to the cardinal points.[16] Attributed to the pyramid, blood sugar dropped and so did corticosterone—the rat version of cortisol. The pyramid rats, chronically restrained, weren't lethargic and stressed like the rats in other environments.

Alexander Golod, a Ukrainian/Russian researcher, also claimed a number of impressive effects from keeping things in his fibreglass pyramid, including a 30–100% increase in yield from seeds stored for one to five days before planting. Allegedly, Russian military radar detected a "column of ionised energy" ascending from one of his pyramids that was said to be around 500 metres wide and two kilometres tall.

While the literature isn't considered super robust in terms of study size and peer review, there's a lot of alignment between the findings so far that also appear to corroborate speculations and anecdotes alike around the Great Pyramid. While the piezoelectrical properties of the Pyramid of Giza are certainly important in considering the full range of functionality and spectrum of phenomena, the basic geometry alone appears to have significant implications and energetic applications.

This kind of speculation could be considered to border on fanciful. But with utmost reverence for the enigmas of the human form and the acknowledgement of limited literature, playing the part of a kind of scientific philosopher in this situation, I'm inclined to make comment on patterns and similarities wherever I see them. The discoveries of nature are not obligated to align with human probability scores.

We are just beginning to explore the quantum coherence in water structures within the body. If microstructures are turning out to be playing important resonance-related roles, then there is likely much left to explore within all the nuances of what could maybe still only be quasi-understood biology. And if it's inclined to be rejected, then I hope it was at least an interesting idea.

If we continue this conversation with analogies, we may start to make loose comparisons between crystals. It's known that many parts of the human body work like a crystal, with the water stored in our body in a quasi-crystalline structure. The pineal gland, too—thought to be the original brain antenna—is known to have piezoelectric microcrystals. Quartz, another famously piezoelectric crystal, is used widely in electronics and cutting-edge technology, including mobile phones. Given the functions in technology, it's possible that these pineal crystals are acting like a kind of biological transducer—biological analogues of quartz.

The Chemistry of Coherence: The Orchestration of Neurotransmission

Having explored how the body aligns with Earth's electromagnetic background through orientation and field sensitivity, we now turn deeper inward—to the chemical orchestra that makes such tuning possible.

Serotonin, being my favourite neurotransmitter, is going to steal the spotlight in this conversation. However, it is also linked quite closely with others, like melatonin and DMT, which are also implicated in sleep processes.

First, what do we know about serotonin? And why is this notorious neurotransmitter important for conversations on the Schumann resonance?

Serotonin's influence stretches across nearly every rhythm of the brain, but its deepest resonance seems to lie within the slower frequencies—theta and delta. Theta waves, oscillating between four and eight hertz, are characteristic of deep relaxation, meditation, and the threshold between waking and sleep. As we've covered, these are also the frequencies of the Schumann resonance, suggesting a natural overlap between our inner rhythms and broader planetary ones.

When serotonin levels rise—during REM sleep, creative absorption, or deep meditation—the brain often slips into theta activity, a state where thought softens into imagery and intuition. Delta waves, slower still, govern the landscape of deep, dreamless sleep. During NREM deep sleep, serotonin helps initiate slow-wave sleep at around 0.5–2 Hz. Serotonin plays a vital role here too when acting as a precursor to melatonin, the hormone that orchestrates this slow-wave sleep. In this nocturnal depth, body and brain move together in their lowest frequencies, where restoration and subtle synchronisation may occur.

Beyond these slower currents, serotonin also shapes the *transitions* between inner states. In the alpha range, associated with calm focus and mind–body harmony, serotonin release supports balance and emotional steadiness. At the higher end of the spectrum, gamma waves—those linked to heightened awareness and moments of insight—are thought to involve the 5-HT_2A receptors—the same that psychedelics activate. This is a curious overlap, especially when we consider the potential role of the endogenous psychedelic DMT in our dreaming processes.

This connection suggests a continuity between dreaming, altered states, and serotonin's broader regulatory role. Both REM sleep and serotonergic

psychedelics engage neural patterns that blur the boundary between internal and external experience. It's here that the chemistry of dreaming, consciousness, and planetary resonance might all meet—serotonin as the bridge between biological rhythm and the deeper, perhaps universal, pulse of awareness.

The Sunrise Hypothesis: Serotonin, the Electromagnetic Phase Tuner

As the Sun emerges on the horizon and early morning light first glints in the retina, the brain's gears begin to stir. Photoreceptors in the eye shout out their electrical signals to the brain's suprachiasmatic nucleus, the master circadian pacemaker, to initiate its sequence…

At this signal, the raphe nuclei neurons in the brainstem start producing a famously dynamic neurotransmitter we call serotonin. Within moments, serotonin levels turn from puddles to floods in the central nervous system. Meanwhile, peripheral serotonin—produced mainly in the gut's enterochromaffin cells and carried through the bloodstream by platelets—follows its own slower rhythm, guided by the body's internal clocks.

Serotonin's name reflects one of its earliest known functions: sero- (serum) + tonin (from "tone" or "tighten")—literally, "blood-tightener". Verily, it modulates vascular tone and pressure, acting as a biochemical regulator of rhythm and resistance. Yet its reach extends far beyond circulation. Through its many receptor types, serotonin as a neurotransmitter influences the electrical pacing of the heart, the firing patterns of neurons, and the oscillatory dynamics of the brain's networks. It acts, in effect, as a **phase tuner**—adjusting how different biological rhythms align and interact across the body's systems.

In wakefulness, this tuning supports alpha and theta wave coherence—frequencies that hover around 8–10 hertz, within the same range as the variable Schumann resonances that continuously pulse through the atmosphere. These frequencies are where the brain's resting rhythm, the heart's variability, and the Earth's field can—at least theoretically—find common ground.

By stabilising neuronal excitability and modulating autonomic tone, serotonin may help maintain bioelectromagnetic coherence within the

body, keeping internal oscillations synchronised with both each other and their environmental context.

Although best known for promoting wakefulness and encouraging positive mood, serotonin also plays a vital part in sleep regulation. It is actually serotonin, not melatonin, that first signals the transition into rest—slowing brain activity and promoting theta–delta coupling, the deep synchrony of restorative sleep. It welcomes the entrance of melatonin onto the scene and even valiantly sacrifices itself in a conversion within the pineal gland, turning into the melatonin that more directly induces sleep.

As night deepens, serotonin in the pineal gland continues in its conversions, becoming the substrate for melatonin synthesis and completing a daily chemical cycle that mirrors the shift from sunlight to darkness. In this sense, serotonin does not simply "switch on" the brain at dawn—it sets the rhythm for the entire light–dark continuum.

If the body is indeed sensitive to ambient electromagnetic patterns such as the Schumann resonance, serotonin's multifaceted role—bridging neural, cardiac, and vascular systems—makes it a credible mediator of entrainment. Through its electrical and biochemical actions, it could help the body maintain a coherent phase relationship between its own oscillations and those of the Earth's field. In this view, serotonin is not just a chemical messenger but a regulator of rhythm—a molecule that fine-tunes the alignment between inner and outer frequencies, ensuring that the body's subtle symphony stays in tune with the planet that hosts it.

Tuning the Instrument: Neurotransmitters as Frequency Modulators

As explored in my book *Quantum Human*, the view on neurotransmitters is transformed to consider these miracle molecules as both actors in quantum coherence and as tiny tuning devices that support the brain and body in modulating frequency. Under the book's proposal that neurotransmitters with aromatic rings, like serotonin, are able to hold and preserve within them specific frequencies, it provides the basis for distinct uses within the body that correlate with both internal and external frequencies.

If indeed there is a kind of synchronistic tuning-fork activation of at least some of our neurotransmitters, the implication of the like of serotonin in the body and brain in coupling with the Schumann resonance could bring

us into even deeper waters when we consider the nuances of connection. If our synchronisation with the SR includes an informational component—that is, if we're 'downloading' information in our sleep—the way we do this could be affected by an extra variable or branch of variables. Could our connections with friends, family, and lovers affect how we're tuning ourselves at night?

These downloads are thought to be received through the heart and pineal gland. If at least the main principles of this are true, then it is likely the case that the brain and body need to be tuned into this frequency bioelectrically. And if there is a frequency or frequencies we tune into, there is likely a source—a directional one—that provides us the clearest or most coherent signal.

What's more, with the distribution of neurotransmitters and receptors around the body, we could also consider neurotransmitter-aided quantum coherence between the brain and heart—to allow and facilitate full-body coordination when tuning to the SR.

Our relationship with the Sun is also characterised by clockwork production of hormones and neurotransmitters. For example, serotonin is produced with morning sunlight exposure, while at night it corresponds with REM sleep while also being used to synthesise melatonin.

Now, melatonin is a curious chemical. Known proudly for its sleep-inducing qualities in animals, it's little known that this chemical been found in *every major plant group*. Of course, plants don't sleep, but, like animals, they do need to conserve energy and be selective with their actions. Among a number of specific functions, it helps broadly to regulate timing and balance. In plants, it's used to stabilise mitochondria and slow metabolic oscillations, dampening cellular excitability and allowing the immobile plant to be carefully selective over where and when it spends its precious energy.

In my view, melatonin could be thought in some respects as a 'vibrational brake'. In humans, it downregulates metabolic and neural activity, reducing oxidative metabolism, promoting GABAergic inhibition, and encouraging low EEG states, such as theta and delta. Deployment of melatonin, then, could be seen like turning the radio dial from Beta station to Delta station. It is likely to lower the resonant frequency of specific brain regions, promoting synchrony with slower oscillatory fields—such as the Schumann resonance.

Neurotransmitters like serotonin play a role in regulating the transition between NREM and REM sleep. Serotonin inhibits acetylcholine signals, which predominantly support REM sleep, helping to regulate the onset of REM sleep during the night. Serotonin-rich states, such as meditation, dreaming, and flow states, align with theta-alpha rhythms, which coincide with Schumann resonance frequencies. If our bodies are instruments, neurons may be the strings, and neurotransmitters the tuning pegs.

If we consider the whole body instrumental, this analogy takes us far. With our very DNA being musical—that is, every cell in our body having specific resonant qualities that can 'play' in sequence—we might consider how the body makes use of this dynamic construction. And dynamic it is: we are constantly changing tune, meddling epigenetically so our DNA and resulting cellular resonance vibrate according to its conditions.

If evolution was a struggle with and against nature, the essence of life that we can observe is that it must stay supple and mobile to survive. This isn't just the external physicality of the lifeform, but its internal activity. Cells have to respire and metabolise; muscles have to be fuelled and signalled. Everything in the body has to coordinate on a remarkable scale—brain to bacteria. And with electrical communications at the basis of our entire being, the way our cells communicate is nothing less than a miracle when you begin to find, in awe, just how complex the human body is.

With various studies investigating the frequency shift of the body and brain according to emotion, health, and mental state, there has to be something coordinating these relationships. In the brain, we understand frequency to be a product of well-conducted electrical neural oscillations. But our neurons here aren't wired together physically; we have gaps we know as synapses. This permits variation in which neurotransmitters are employed, appropriate for the current situation. This means that our human circuitry is designed specifically to be dynamic.

This isn't just like a knob for frequency that can be turned up and down. No, it's a multi-dimensional, highly organised system that can tune and shape the huge landscape of electrical circuitry in miraculous detail.

This might be an awkward analogy, but… If you thought of the human body like a giant bagpipe (or one of those squeaky rubber chickens), you might get different sounds from squeezing different parts of the body. Now, consider that you also get different sounds from squeezing at different strengths, from using different kinds of gloves on your hands, and from

making different sounds of your own at the same time. Already there are millions if not billions of combinations of sound you could produce from this strange instrument.

This strange analogy is not without reason. If we perceive that the body is 'made of sound'—making a connection between genetic resonance, cymatics, and specifically coordinated protein production and placement [see *Quantum Human*]—our physical shape and internal operations are based in resonance.

The constant tuning of our genetic machinery's vibrational expression must be for good reason. There must be huge advantage to vibrating harmoniously with one's environment. Every single cellular oscillation must be advantaged or disadvantaged by surrounding vibrations, over time saving or losing immense measures of energy.

This has social implications as much as it has physiological implications, where phenomena like introversion and extraversion may be behavioural observations around vibrational compatibility and ability/desire to assimilate. Larger groups produce more complex and often more intense vibrational patterns, which can either require energy to maintain (introverted) or uphold a person's vibration, nested in the co-created group vibration (extraverted).

If my theory on serotonin (detailed in *Quantum Human*) holds any water, social politics are coordinated by neurotransmitter-centred energetics. That is, it's our neural transmission that subtly tunes our physical vibration—a frequency that spans multi-dimensional space. But resisting the urge to re-explain everything here, we might simply look at neurotransmitters and hormones as tuning mechanisms for our 'instrument'.

Like a capo for a guitar, like a pedal for a piano, or a finger on a fret, each microscopic travelling molecule with the capacity to affect electrical transmission or resonant structure could play a part in fine-tuning our vibrational signature.

This leaves us a chemical-electric smorgasbord. Not only neurotransmitters, but hormones, peptides, ions, proteins, enzymes, lipids, bacteria… The body has a supermarket of options when it comes to how it might create slight variations of signalling and/or resonance. Collectively, this comes to a singular experience. We think, we feel.

And if a person's vibration carries information—which it certainly does—we might consider that there is an inaudible language our bodies speak. To modulate your frequency with tact and conscientiousness may be how we perceive things like maturity, self-control, sensitivity, and empathy. But these energies may be 'contagious' in the way they are broadcasted and received subtly by the biological antennae described in this essay. Social 'domination' politics, then (as I call them), may be the game of conducting one's frequency ('energy') with control and confidence.

Cortisol, for example, is considered to 'tighten' the body, preparing it for action somewhere along the fight or flight scale. Our electrical oscillations can quicken and change from something like stress. Cortisol levels can increase simply from moving from low to high altitude. This tightens the frequency bandwidth, so to speak, as the body moves into a high-alert, narrow-focus state rather than an open, resonant one. This is said to change one's energy, change 'the vibe', resulting in changes of perception and behaviour.

When we frame this in the light of sleep theory, we begin to see the pieces connect for the relationship between circadian production of hormones and neurotransmitters and the ability to enter sleep consciousness. If we are morphing vibrationally, and so is the planet, what could this mean for life here on Earth? Have we vastly underestimated the interconnectedness of everything? I'm starting to believe so.

Serotonin in the Heart

With the heart as our primary modulator and conductor of frequency, we might consider how this works and again what the implications might be. At night, the heart slows, its rhythm softening in step with the body's descent into rest. Heart rate variability (HRV) and the autonomic nervous system begin to synchronise with the brain's slower rhythms, creating a subtle coherence between pulse, breath, and wave.

When our breathing slows to around five or six breaths per minute, the heart follows suit, moving into a rhythm of about 0.1 hertz. This frequency gently resonates through the system, aligning with the body's own low-frequency oscillations. These rhythms touch the edges of theta but settle more deeply into delta—the slow, sweeping currents that define the deepest stages of sleep. In this state, the boundaries between systems blur;

the heart and brain move together, sharing tempo and tone, guided by the breath.

It's within this nightly harmony that the chemistry of coherence begins to unfold. The slowing of breath and heartbeat changes blood flow, electrical activity, and the release of key neurotransmitters. Among them, serotonin plays a special role—bridging brain and body, tuning both the nervous and cardiovascular systems to a shared frequency.

Serotonin isn't just some "happiness chemical" that lives in the brain—it's a key player in the rhythms of the heart. In fact, more than ninety percent of the body's serotonin is stored not in neurons but in platelets, circulating quietly through the bloodstream until it's called upon for a necessary function. The heart itself is richly sensitive to this molecule. Its muscle cells, pacemaker nodes, and blood vessels are lined with serotonin receptors, giving it the ability to respond directly to subtle shifts in our chemical and emotional state.

Through these receptors—known as 5-HT receptors—serotonin directly influences how the heart beats. Some of these receptors, like 5-HT_1, help regulate blood pressure by tightening or relaxing the arteries. Others, such as 5-HT_2 and 5-HT_4, act directly on the heart's own muscle fibres and pacemaker cells, increasing both the strength and pace of contraction through its electric signalling. A special class, 5-HT_3, works as an ion channel, directly affecting the electrical impulses that move through the heart tissue. Together, this network of serotonin pathways forms a delicate control system for the heart's rhythm—an electrochemical conversation between the brain, bloodstream, and cardiac tissue.

Because the heart is our most powerful electrical organ, producing a measurable electromagnetic field that extends beyond the body, serotonin's role may reach further than we realise. When serotonin levels rise or fall with mood, stress, or circadian rhythm, they subtly alter heart rate and electrical conduction, which in turn shapes the heart's electromagnetic field. This field, recorded in the ripples of an ECG or by more sensitive magnetocardiography, is not static—it pulses, expands, and contracts with every beat. Some researchers suggest that changes in heart-rate variability, often linked to emotional balance and serotonin activity, may reflect the coherence of this field, possibly influencing how our internal rhythms synchronise with the brain and even with others around us.

In this sense, serotonin could be imagined as a kind of bridge—linking chemistry, electricity, and subtle magnetism within the body. Through it, the heart and brain maintain their dialogue, each adjusting to the other's signals in a continuous balancing act. And if the body truly resonates with wider electromagnetic patterns, such as the Schumann frequencies that pulse through the planet, serotonin might be one of the quiet mediators of that connection: a molecule that translates emotion into rhythm, and rhythm into resonance.

So, could serotonin play a part in coordinating the resonances between heart and brain?

If the heart and brain are in constant conversation, serotonin may be one of the mediators of their language. But the heart is not just a passive receiver of neural commands. In fact, the heart sends more signals to the brain than the brain sends to the heart. These messages travel through electrical pathways, pressure waves, and the body's electromagnetic field. Because serotonin operates within both systems—governing heart rhythm and influencing neural activity—it may serve as a biochemical thread linking their communication.

This opens a wider question: could serotonin also play a role in how these internal fields interact with the planet's? Given serotonin significantly influences the theta waves that align with the SR, it's possible that fluctuations in serotonin, whether through mood, breathing, or circadian rhythm, affect how our heart and brain synchronise at these frequencies.

Serotonin might act as a fine-tuning mechanism within the body's electromagnetic system—subtly adjusting the coherence between heart and brain, and perhaps even how we align with external fields. A rise or fall in serotonin could shift this balance, influencing not only our emotional state but the very rhythm of our internal resonance. It's speculative, yes, but compelling: that the same molecule that shapes our mood might also shape our connection to the wider energetic environment that holds us.

A Splash of DMT

Dr Rick Strassman, who wrote the book *DMT: The Spirit Molecule* in 2001, hypothesised that DMT—another serotonergic molecule—is released from the pineal gland during REM sleep, playing a role in the dreaming process. While studies have found DMT-like activity during these moments, there's little evidence to confirm this hypothesis. Yet we know that neurotransmitters play a critical function in different brainwave states, meaning that we could draw a rough conclusion that the brain's vibrational state corresponds with its chemical environment.

In studies done on rats, those given DMT produced electrical activity that resembled that of REM sleep.[17] Within seconds of injection, alpha and beta oscillations—associated with normal waking consciousness—were strongly suppressed, while delta and theta power increased, increasing signal diversity and complexity across the cortex. While the study wasn't looking for a comparison with REM, the rich neuronal integration from the DMT stands as comparable to the character of REM profiles.

If there is truth to DMT playing an important function in sleep, we might consider the profound and strange effects of this enigmatic neurotransmitter. The oddness of dreams and DMT-induced experiences are not without their similarities, and if we take seriously the hypotheses that dreams are used for information integration and anecdotal claims of occasional prophetic purposes, we could consider the possibility that a planetary consciousness could have some form of oversight and insight beyond human perception.

Without delving into much speculation on the nature of planetary consciousness, we can still touch on what it could mean to have a nightly connection established with a global frequency. If information is passed in some way between body and planet, we can consider that a process of integration or calibration could be a meaningful part of sleep.

As speculated in my other works, I believe this DMT molecule can act as an epigenetic catalyst, effectively unlocking or enhancing the processes by which our gene expression updates to integrate new information and experiences. This would make sense in the context of sleep, waking up as a "new person" after a long night of biological repairs and updates. While it isn't known with certainty that sleep is our primary window for global epigenetic changes, it is a major one—especially for the brain.

A less stable speculation could include, in return, an "uploading" of our experiences to a universal body of information—planetary or otherwise.

However, I couldn't hope to offer any proof of this—only a thought to chew on.

But while studies on this hypothetical phenomena are limited, there is some evidence suggesting that there could be a mechanism linking serotonergic compounds like DMT to epigenetic modulation.

In studies done on ayahuasca[18]—a psychedelic South American medicine—it was found that the DMT it contained would activate the SIGMAR1 gene by binding with the Sigma-1 receptor. When this happens, it is believed to trigger a cascade of gene transcriptions, possibly affecting gene expression and/or chromatin state—the protective sheath of DNA. When the chromatin is affected, it can sometimes 'open the gates' for other factors to modulate gene expression.

While serotonin, a chemical sibling of DMT, plays a vital role in our daily lives and shares much of its structure with DMT, it does not affect the SIGMAR1 gene in the same way.

Curiously, the SIGMAR1 gene is unique to humans—only 30% in similarity with other mammalian proteins. However, it shares 66.7% of its identity with an enzyme found in fungi, particularly one that produces ergot alkaloids—the precursor to LSD.

LSD is a fascinating chemical—another serotonergic compound like serotonin and DMT, which binds tightly to serotonin receptors in a way that the others don't. Another curious characteristic of LSD is that it's extremely hydrophobic, which means it has greater potential than the other serotonergic molecules to cross lipid membranes and intercalate with the DNA. In simple English, it is better prepared to slot into the DNA and affect its gene expression. However, this is only theoretical—difficult to confirm or deny, as *in vivo* observations aren't so easily achieved.

Serotonin can also theoretically insert itself into DNA to make changes—a theory I explore in my *Quantum Human* book in greater detail. This is a follow-up of Terence McKenna's belief that the serotonergic molecule psilocin, from magic mushrooms, being to intercalate with the DNA to upload its resonant frequency. However, it appears that these serotonin-like molecules do not do this under normal conditions. There would have to be a catalyst and possibly a supporting chemical adaptor. Could DMT be one of these catalysts?

On LSD, its ability to affect gene expression is no longer just speculative; studies done on mice are showing powerful effects on DNA methylation. With methylation being one of the primary methods of modulating gene expression, whole-genome methylation in mouse brains is an exciting prospect when we extrapolate these findings to how other serotonergic molecules could be interacting with the human genome.

In a 2022 study from Inserra et al[19], repeated LSD administration modulated DNA methylation in 635 sites across 178 proteins. This wasn't observed to happen through intercalation, but through signalling networks that regulate the epigenetic machinery. However, it seems too curious to me that serotonergic molecules fit so closely for this role for it to be ignored. Even if neither proven nor disproven to have a CD-ROM-like 'upload' mechanism that Terence McKenna suggests, it is still a fascinating proposal. In reality, while serotonergic molecules have a planar aromatic ring, they are still considered too loose and flexible, and without sufficient positive charge, to properly bind and intercalate directly with the DNA. There is also no direct evidence for this. However, in binding with the 5-HT_2A serotonin receptors in the brain and central nervous system, it could theoretically change the DNA coiling and charge in such a way that *might* make the conditions temporarily more accommodating for molecular intercalation. Could high doses of psychedelics possibly have this dual effect, enough to enable huge cascades of epigenetic changes?

LSD in the example above works as perhaps a more accentuated molecule with similar properties to DMT and serotonin. While the others are chemically less likely to do this, it is still theoretically possible under the right circumstances.

- The Sigma-1 receptor protein doesn't live near the DNA, but it relocates to the nuclear envelope (the packaging of the nucleus) under times of stress. This means that for the DMT to be able to unlock the chromatin to fast-track a number of epigenetic changes, it needs to be coupled with stress. So what kinds of stress can help to trigger these epigenetic modifications?
- This could be inflammation, oxidative stress, or low energy. Curiously, many of the situations in which we would produce DMT endogenously would also be extremely stressful. A good example of this is childbirth, when the child is physically squeezed and stressed as it passes through the birth canal. As the baby transitions from the womb to the outside world, it experiences oxygen deprivation and

then sudden reoxygenation, thermal shock as it goes from warm fluid to cool air, mechanical pressure and trauma from the contractions and delivery, hormonal surges (e.g. cortisol, adrenaline), and massive shifts in metabolism as its mitochondria kick into gear.

- During psychedelic experiences like ayahuasca—and sometimes in deep meditation—one can also experience intense emotional stress through revisited memories, traumas, and life themes, as well as physiological stress as the medicine takes hold and the purging begins. Sweating, vomiting, crying, defecating… These would surely help to open the door to epigenetic changes.
- Near-death experiences are another example of a life-changing situation that may bring more than just a mental revelation. In true near-death experiences, people speak of profound psychedelic journeys, sometimes leaving their body, and their life is never the same again. We know that the body produces DMT in floodlike quantities when it anticipates death, which itself is a fascinating phenomenon that begs many questions about the nature of death and even life itself
- Even during sleep—what we might consider peaceful—our body temperature drops, our metabolism changes, and we even undergo brief, localised drops in oxygen. Through distinct, controlled micro-stress cycles (especially during deep sleep), the body and brain produce reactive oxygen species and conduct fluctuations in glucose and ATP. These will strain our mitochondria and brain cells, actually supporting the cleaning and repairing processes. This activates protective pathways involving SIGMAR1. What's more, it's possible that the very experience of dreaming—especially nightmares or emotionally intense dreams—could play a supportive role in creating neurochemical stress as we adapt and integrate information, possibly playing a highly practical, semi-conscious role in making epigenetic modifications.
- Each of these situations involving DMT could represent a natural adaptation circuit, where moments of intense stress are paired with the production of this endogenous neurotransmitter to fast-track necessary changes. Apart from having personal benefit, this could also be considered a fascinating mechanism integral in evolutionary biology.
- When SIGMAR1 relocates to the nuclear envelope, it can recruit or regulate enzymes that remodel chromatin. This enables several key

epigenetic modifications, such as histone tightening or loosening (acetylation/deacetylation), methylation and demethylation, and mitochondrial gene expression shifts. This has the capacity to make substantial changes to our gene expression, for long-term developmental adaptation, memory and learning, circadian response, stress response, neuroplasticity, and other kinds of genetic fine-tuning. From what we can speculate, this appears to be in line with my original hypothesis of DMT being a kind of super-catalyst for epigenetic modulation and 'resets'.

- Theoretically, DMT can be produced almost anywhere, anytime within the body. Its creation and function are both said to happen inside the cell, which makes it very difficult to detect *in vivo*. It only requires tryptamine, which comes from tryptophan—one of the most common amino acids in the body—and an enzyme called INMT. INMT is found widely in the body—in the lungs, heart, adrenal glands, thyroid, placenta, pancreas, stomach, small intestine, lymph nodes, spinal cord, skeletal muscle, retina, pineal gland, and various brain regions. INMT can fulfil other methylation roles, though its main function is related to DMT. This might lead one to think that DMT is far more commonly produced than we're led to believe. There's evidence for DMT being produced in the central nervous system, too, and commonly in the pyramid neurons we talked about previously.
- Adding to this, it's argued in Rick Strassman's book that the body is effectively organised so that the body can be flooded with DMT at a moment's notice. It's difficult to say whether the abundance and accessibility of this profound "spirit molecule" is to keep the body permanently prepared for important moments like birth and death, although it appears that it has functions both inside and outside the cells. Inside, it appears to be able to modulate gene expression; outside, it appears to work similarly to other serotonergic psychedelics, activating the brain and nervous system in ways that can affect signalling patterns and overall resonance. If this is part of our regular biological operation, the evidence seems to support the idea that sleep couples well with DMT. Studies find that the effects of sleep and DMT in reversing and healing trauma overlap significantly, which could be partly causal.
- It was also the legendary Terence McKenna who proposed that the body tends to prefer psychedelic molecules over the endogenously

> produced serotonin because they are more efficient. What this means is that, playing the role of a neurotransmitter, a molecule like DMT—which is chemically simpler than serotonin—could theoretically enhance electrical signalling in short bursts. Given studies have found that authenticity is our most powerful vibration, could a molecular synthesis of this vibration from DMT even support our healing processes and coupling with the Schumann resonance? This is a speculation I'll leave to your own imagination.

Researchers at Kyoto University[20] have discovered that cells can directly respond to sound waves, altering their gene activity, behaviour, and even fate. In experiments where pure tones (such as 440 Hz, 14 kHz) or white noise were played into petri dishes at biologically relevant intensities, the cells showed clear genetic changes. After just two hours, activity in 42 genes had shifted; after 24 hours, that number rose to 145. Many of the affected genes are linked to mechanical stress, inflammation, tissue repair, and cell death, suggesting that cells perceive sound as a genuine physical stimulus rather than passive vibration. When stem cells were exposed to continuous tones while being encouraged to become fat cells, sound reduced fat-gene expression by over 70%—including key regulators Cebpa and Pparg. In effect, the cells resisted turning into fat.

This work provides scientific backing for sound's biological influence, once dismissed as fringe, and points toward future research into acoustic therapies and the ways sound might subtly shape human biology. As this research has only explored a thin slice of the total possibilities, we might speculate on how atmospheric resonance affects us on a cellular level, and if body alignment improves or affects this resonance. If we take it a step further and see a potential pattern between harmonised resonance and helpful epigenetic alterations, this could add some extra weight to the importance of sleep direction and planetary alignment.

As an extra, thoughtful note, we know that sleep quality and temperature also play an important role in how the body stores and metabolises fat. Could sleep direction help you lose weight?

Food for thought…

The Implications for Evolution

The human being is said to have evolved over millions of years, inside of a cavity where the Schumann resonance is said to have existed for around 3 billion. As a constant signal with global reach, if we evolved eyes to see and ears to hear, one might wonder how the human's evolutionary construction has developed to make use of it. We know from studies that the human body can sense it, respond to it, and benefit from it. Just how deep within us does this go?

While I don't plan on getting deep into evolutionary theory in this essay, there is still plenty of room to vary from the Darwinist and accidentalist models that are so prevalent in popular culture. While also unsatisfied with the typical creationist view of God clicking the world into existence with a snap of His fingers, I believe there is a middle road that permits and respects arguments from both sides.

The currently most accepted model of evolution is the *Neo-Darwinian synthesis*—a model based in random mutation, expanded by the 'extended' mechanisms of epigenetics and various contributors to adaptation. This already conflicts with itself somewhat, given we have observed *in vivo* adaptations that are passed down to offspring. However, scientists reconcile these as being complementary contributors, still keeping the idea of random mutation alive and denying any plausibility of a governing intelligence.

The idea of natural selection acts as a filter for the less-functional results of randomised genetic recombination. However, a common critique of the proposed randomness of evolution is that there is very little evidence for failed branches, which—if randomisation truly is at the heart of evolution—should produce far more dysfunctional variants and a greater array of fossils than has previously been found. This is happily explained away by the coincidence that the functional creatures—those who, by chance, hit the evolutionary bullseye—seemed to successfully fossilise, while the vast majority of failures decayed out of existence before we managed to find them. However, if this were the case, we should theoretically still see significant proportionality in what *has* been found.

Another gaping hole in the typical theory that most people seem adequately satisfied with, is that evolution appears to jump from one whole

creature to another. That is, there don't appear to be any 'in-between bits'—no fossils of half-developed wings, claws, or breathing apparatus. Somehow, as creatures evolve, they mutate in dramatic leaps to the next functional form. The idea of a 'mutation' appears to be no roll of the dice, but rather a highly specific functional patch. This is far beyond a notion of accidentalism (a long series of random, fortunately functional mutations) to the point where we might suspect an element of intelligent or purposeful design.

Because, if we put secular biases aside and some assumed knowledge that science's limitations must also be nature's limitations, the evidence would suggest that there does exist some form of guiding intelligence, even if we are unable to explain it. Using randomness as an explanation is science's version of having 'magic' as the rationale—something beyond perception and/or conception. Given these 'random mutations' seem to work so darned well given the infinity of variables and challenges needed to be overcome in the insanely complex world of biology, I feel we fall very far short of giving full credit to the full body of events required even to reach the 'useful intermediates' observed between widespread evolutionary stages. Any form of functional biology, in my opinion, should be considered a veritable miracle if it were a randomised construction of nature rolling dice. But similar to neurotransmitters giving a neuron a greater or lesser 'chance' of firing, we might still maintain some allowance for this idea of 'randomness' while also giving a little more credit to purposeful driving forces.

Despite the ongoing debate, the workings of God and natural evolution are not mutually exclusive. I am not here to take a side on spirituality, although my position is that there are likely mechanisms in nature that allow biological transitions and evolutions to 'fit' into a new working model that in some ways is pre-designed. This is not necessarily an argument for God, rather more of an intent to explain the mechanisms of evolution through how DNA may have to be compatible with the vibratory matrix we've talked so much about. For if DNA is an instrument of nature that, by design, has to resonate in harmony successfully with its environment, then only by a leap into another form of stability can it afford to exist. Most states in between, perhaps, may not be genetically stable.

It's possible, then, that the global vibrations of the Schumann resonance may be acting partly as a trigger for evolution, but also as a vibratory guide—a fractalised vibratory mould, in some senses.

My sub-hypothesis here is that this matrix could be both pushing and pulling us genetically—a kind of vibrational 'pressure' that has the capacity to 'pop' us into a new vibrational frame, like a new key or octave. This may be a centring process, where this 'pressure', like impedance, would be an energetic relationship within acoustical physics that likely has a kind of threshold that must be reached for a mutation to occur. But random it is not, because (I believe) it is influenced greatly by the resonant environment.

For any musical instrument, where the sound results from the physical construct, certain frequencies resonate more strongly than others. We might acknowledge that there appears to be more space between notes that resonate optimally, the intervals between these points of resonance known commonly as being 'out of tune'. To retune the instrument from one octave to another will pass through a continuum of frequency until it finds its next stable harmonic relationship.

In evolutionary theory, there is a concept called 'fitness landscapes' that was proposed in the 1930s by Sewall Wright. This is effectively a three-dimensional 'map' of evolution "used to visualise the relationship between genotypes and reproductive success", as described by Wikipedia. In this landscape of hills and valleys, height represents fitness—the ability to adapt successfully to one's environment.

Those at the tops of peaks reproduce most successfully, while those at the bottom in 'valleys' struggle—expectedly heading towards extinction. However, it's very well established in the literature that those at the tops of peaks, well-adapted to their environments, are actually the least likely to evolve. This conflicts in some ways with how we interpret the word 'evolution'—understanding it not as a steady march toward improvement, but more of a tracking and correspondence with what physical form couples well with the current environmental conditions. 'Survival of the fittest' can simply mean a well-adapted species staying where it is, while those lower on the peaks may be given more of an opportunity to 'walk through the valleys' to find another, better peak.

This makes a very interesting and important point—that evolution doesn't happen when a species is comfortable. Nature doesn't seem to change what already works. Therefore, the idea of 'random mutation' shouldn't be so random after all and should logically effectively always have a catalyst. There appears to be rhyme and reason for evolution, and while it may not

always be successful, the randomness we perceive could actually be a very logical and even predictable mechanism at work that is simply beyond perception—because it is of a non-chemical, vibratory nature.

It's already proven science that high-energy EMF has the capacity to cause (chaotic) genetic mutation. Low-energy artificial EMF is typically considered too weak to force the same changes. This is considered to apply also to the more benign natural EMFs like the Schumann resonance. However, I recall reading about a beautiful, powerful, and fascinating concept from the 1973 book '*The Secret Life of Plants*' by Peter Tompkins and Christopher Bird. That was that nature doesn't need to blow open the safe with force—it knows the combination.

Instead of natural EMFs like the Schumann resonance breaking chemical bonds to force the genome into another structure, evolution may instead work by nature offering a kind of frequential framework, creating a space, an alternative, for the DNA to occupy. It likely doesn't need to break any bonds in the first place, simply being present when the DNA is being copied or recreated. This may not be the primary catalyst by itself, but more of a guiding intelligence that works in parallel with other mutagens.

We usually consider successful adaptation based on outward function: the ability to acquire food, resist extreme temperatures, and navigate the local environment advantageously. But if local environments are prone to specific vibrational characteristics, we might wonder if there is a 'better' or 'worse' frequential adaptation. This might align with Astrocartography theory, where certain genotypes are better suited to lines created by planetary trajectories due to their vibratory or gravitational influence.

A 1970s theory called 'punctuated evolution', from palaeontologists Niles Eldredge and Stephen Jay Gould, sought to explain patterns they observed in the fossil record. This is effectively the observation that evolution happens in 'bursts', rather than evolution happening by gradual, consistent changes as Darwin expected. This followed the observation that many species would appear *suddenly* in geological strata, remain *stable* (stasis) for long periods, and then disappear or change *rapidly*.

This to me signals a built-in threshold for what could be considered causal evolutionary stimuli. That is, there ought to be a significant reason for a species to adapt collectively, as well as a direction for change dictated to some degree by a stimulus. That stimulus could be something like hunger,

diet change, environment change, predator or prey response, and co-adaptation with other species.

This aligns with the frequency leaps I'm proposing. Of course, environments can shift rapidly as can other conditions for living populations, although they can also change slowly and gradually. When we begin talking about stimuli for adaptation or mutation, it's possible that the vibrational environment could begin to 'leave behind' the old genetic configuration, spurring an acute recalibration better suited to the new musical key.

One of the most consistently observed patterns in ecology and evolutionary biology is the observation that sudden or gradual environmental changes have acted as a universal stimulus for adaptive change across multiple species residing in a shared area. When the environment changes, every species sharing that environment experiences a selective shift at once. Some go extinct; others adapt through changes in gene frequencies, behaviour, or geographic range (living zone). This could easily be attributed to more obvious changes in the physical environment like temperature, atmosphere/weather, or other variables—whether sudden or gradual. Yet it's entirely likely that these changes also bring a change to the vibratory characteristics of the location as well. Because if evolution is represented in changes to DNA, we might consider how exactly the conditions in the outside world translate to specific, sensible genetic changes. I.e. how does the DNA 'know' how to respond to a drop in temperature, reduced sunlight or food, or altered soil chemistry?

The idea of co-adaptation is not new, although I will once again point to my upcoming book *Quantum Human*, which proposes more precise mechanisms for how inter-species relationships may affect individual evolutions.

However, I'd like to propose something else today. Given we're talking quite a bit about DMT and its influences on epigenetic changes, there is a moment in a living creature's life where it is said to be producing more of this wonderchemical than any other. That is, when it dies.

The evolutionary process, when it considers adaptation to predators and life-threatening stimuli, seems to trip up when trying to explain how something successfully adapts to that which is likely to kill it. For it's surely much easier to die to something that's already evolved to kill you than changing your whole species' genetic structure in time to protect yourself.

Adding to Rupert Sheldrake's brilliant theory on morphic resonance, I propose that, not only is this true, but it is added to in the very process of death itself. If the morphic resonant field is responsive to the frequential output of a living (or dying) being, then the process of death could provide us some clues to some last-minute updates to the species' informational catalogue, which may store experiences, thoughts, perceptions, and even harmful stimuli delivered by predators and other unpleasant moments.

Because why, in our very last moments, does the body put such express effort into manufacturing floods of DMT—a psychedelic chemical that, in the vast majority of situations, could not hope to save the being from death? We do know that it can help to preserve neurons in a state of asphyxiation, although this is obviously temporary. Could a state of short-lived cellular preservation support the body's efforts in a vibratory alteration of the DNA for a kind of rapid informational upload to the aether?

If DMT plays the part of unzipping the chromatin in which the DNA hides, then a veritable deluge of this epigenetic catalyst may be a last-ditch effort to quantumly communicate the cause of death to 'the Field' so its survivors and successors may benefit.

Theoretically, once the chromatin is open, the biochemical reactions that create and permit epigenetic modifications are near-instantaneous—as quick as just seconds to hours, which is the same time it takes before the brain and body cells begin to lose function. This can be complemented and facilitated with the help of cortisol and other stress hormones, as well as immune cells exposed to pathogens—either or both likely to be activated from an acute cause of death.

The actual changes that happen once the chromatin is open could be from a variety of sources. According to my theory in *Quantum Human*, the body continuously updates according to one's social activity, especially regarding an integration of other people's vibratory 'essence' (unique genetic/cellular frequency) most notably from lovers, family, and those often in close proximity. It's possible also that we 'update' overnight according to the qualities of our environment, which can change dramatically even if we are in the exact same place—because the planet isn't. Diet, weather, physical activity, conscious experience… These could also contribute. But we might wonder: is this Schumann reception just a one-way 'absorption'? Or is the Schumann resonance—the Earth, really—undergoing its own evolution?

Thank you for reading.

[1] ELF and SR can affect calcium channels in the human brain:
https://www.tandfonline.com/doi/10.1080/15368378.2025.2508466
[2] Brathikan Vijayamohan Mankayarkarasi, '*Geo-Somatic Resonance Theory: A Vibrational Framework for Sleep as Planetary Entrainment*'
https://arxiv.org/html/2506.14760v1
[3] Grazing animals point north-south:
https://www.pnas.org/doi/abs/10.1073/pnas.0803650105
[4] Dogs are sensitive to the Earth's magnetic field:
https://www.researchgate.net/publication/259472878_Dogs_are_sensitive_to_small_variations_of_the_Earth's_magnetic_field
[5] https://www.eneuro.org/content/6/2/ENEURO.0483-18.2019
[6] Schumann effects on insomnia:
https://www.dovepress.com/the-subjective-and-objective-improvement-of-non-invasive-treatment-of--peer-reviewed-fulltext-article-NSS
[7] Schumann effects on blood pressure:
https://www.sciencedirect.com/science/article/abs/pii/S0753332205800034?via%3Dihub
[8] Benefits of ELFs on the body:
https://pmc.ncbi.nlm.nih.gov/articles/PMC8126245/
[9] Biophoton emission changes with daily cycles:
https://pmc.ncbi.nlm.nih.gov/articles/PMC2707605/
[10] Biophoton emission created through the imaginative process:
https://www.sciencedirect.com/science/article/abs/pii/S030439401200208X
[11] Small fields can still affect neural transmission:
https://www.jneurosci.org/content/jneuro/27/11/3030.full.pdf
[12] How shape affects pyramidal neurons:
https://pmc.ncbi.nlm.nih.gov/articles/PMC2849761/
[13] The heart acts as a global cellular synchronisation signal:
https://www.researchgate.net/publication/274451622_The_Energetic_Heart_Biolectromagnetic_Interactions_Within_and_Between_People
[14] Pyramid shape collects and concentrates EMF:
https://pubs.aip.org/aip/jap/article-abstract/124/3/034903/156109/Electromagnetic-properties-of-the-Great-Pyramid
[15] Pyramid effects on barley seeds and water:
https://pubmed.ncbi.nlm.nih.gov/11605404/
[16] Rats kept in wooden pyramids are protected from oxidative stress:
https://pmc.ncbi.nlm.nih.gov/articles/PMC1810373
[17] DMT produces REM-like effects.
https://www.nature.com/articles/s41598-019-45812-w
[18] Ayahuasca/DMT and its role in epigenetic modulation:
https://pmc.ncbi.nlm.nih.gov/articles/PMC5895707/
[19] LSD's ability to affect genetic expression:
https://pmc.ncbi.nlm.nih.gov/articles/PMC5895707/
[20] Cells respond to sound:
https://www.nature.com/articles/s42003-025-07969-1